

FCC Part 2, Part 15, Part 87

**Test Report
for the**

Diversity Mode-S Transponder

Model # NGT-9000

Test Report Number RV58044-001

Prepared For:

ACSS, an L-3 Communications & Thales Company
19810 N. 7th Avenue
Phoenix, AZ 85027

Prepared by:

**DNB Engineering, Inc.
5969 Robinson Avenue
Riverside, CA 92503**



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DOCUMENT HISTORY

Revision	Number of Pages	Revised Pages	Description	Date
-001	All	All	Report Release	13 Jan 2015

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CERTIFICATION OF TEST DATA

This report, containing electromagnetic immunity and emissions test data and evaluations, has been prepared by an independent electromagnetic compatibility laboratory, DNB ENGINEERING, in accordance with the applicable specifications and instructions required per the Introduction. DNB Engineering has received accreditation to perform these tests by the following authorizations:

NEMKO EMC Laboratory Authorization No. ELA 115A
NIST / NVLAP: Lab Code No: 200851-0

FCC Registration No. 99985

The data evaluation and equipment configuration presented herein are a true and accurate representation of the measurements of the test sample's electromagnetic immunity and emissions characteristics as of the dates and at the times of the test under the conditions herein specified.

This report shall not be reproduced, except in full, without the written approval of DNB ENGINEERING, INC. Results contained in this report relate only to the item tested.

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Report Prepared By:	Maridee Winans <i>Maridee Winans</i>	13 Jan 2015
	Administrative Assistant	Date

Report Reviewed by:	Thomas Elders <i>Thomas Elders</i>	13 Jan 2015
	Facility Manager	Date

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FCC Part 2, Part 15, Part 87 Test Completion Record for:

ACSS, an L-3 Communications & Thales Company: **Diversity Mode-S
Transponder**
Model # NGT-9000

Test Start Date: 17 Dec 2014

Test Completion Date: 23 Dec 2014

*The EUT was tested in accordance with the requirements of the
specifications and standards listed below and found to be fully compliant:*

FCC 47 CFR Reference:

2.1051, Spurious Emissions at Antenna Terminals
2.1053, Field Strength of Spurious Radiation
15.109, Radiated Emission Limits
87.139, Emission Limitations

RF Power Output:	Pass ☒	Fail ☐	N/A ☐
Modulation Characteristics:	Pass ☒	Fail ☐	N/A ☐
Occupied Bandwidth:	Pass ☒	Fail ☐	N/A ☐
Spurious Emissions at Antenna Terminals:	Pass ☒	Fail ☐	N/A ☐
Frequency Stability:	Pass ☒	Fail ☐	N/A ☐

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1.0

INTRODUCTION

Electromagnetic Compatibility (EMC) tests were performed on a representative sample(s) of ACSS, an L-3 Communications & Thales Company, Diversity Mode-S Transponder, Model # NGT-9000. The purpose of this test was to demonstrate compliance of the EUT with the applicable limits. The test results have been summarized herein, and all data sheets have been incorporated in Appendix C.

Where applicable, cables were routed consistent with the typical application by varying the configuration of the test sample. The effect of varying the position of cables was investigated to find the configuration that produced maximum emissions and susceptibility.

The EUT was evaluated to determine the “worst case” positioning of both cables and axis. Once the “worst case” configuration was determined care was used to maintain this configuration throughout the test.

2.0

DEVIATIONS

Deviations/Modifications to the EUT

NONE

Deviations/Modifications from the Test Standards

NONE



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3.0

TEST SITE AND EQUIPMENT

The test equipment utilized in the performance of this test, along with current calibration information, is listed in the Test Equipment Log of Appendix A.

UNCERTAINTY TOLERANCE

DNB Engineering's Riverside Facility is within acceptable uncertainty tolerances per ANSI C63.4 (2009) sections 5.4.6.1 and 5.4.6.2 as well as CISPR 16-1(2002) Annex L, section L.2.

ANSI C63.4 (2009)

5.4.6.1 Site Attenuation. A measurement site shall be considered acceptable for radiated electromagnetic field measurements if the horizontal and vertical NSA derived from measurements, i.e., the "measured NSA," are within +/- 4 dB of the theoretical NSA (5.4.6.3) for an ideal site.

5.4.6.2 NSA Tolerance. The +/- 4 dB tolerance in 5.4.6.1 includes instrumentation calibration errors, measurement technique errors, and errors due to site anomalies. These errors are analyzed in ANSI C63.6- 1998 [3], wherein it is shown that the performance of a well-built site contributes only 1 db of the total allowable tolerance.

CISPR 16-1 (2002)

L.2 Error analysis

...The total estimated errors are the basis for the +/- 4 dB site acceptability criteria consisting of approximately 3 dB measurement uncertainty and an additional allowable 1 dB for site imperfections.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.



4.0

TEST DESCRIPTION

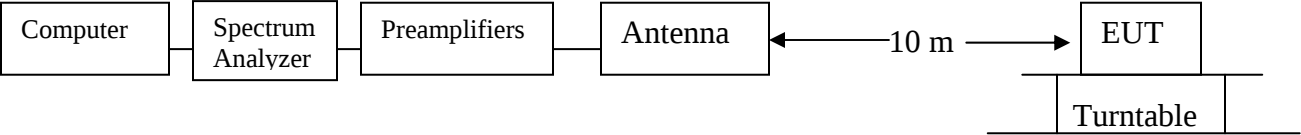
4.2

Radiated RF Emissions (ANSI C63.4 2009)

To measure radiated emissions, the EUT was set up on the 3 or 10-meter open air test site. The EUT is placed on a wooden table, which rests on a wooden turntable. The top of the table is one meter above the ground, and the turntable can be rotated 360 degrees. For each frequency measured, the antenna is raised and lowered for both horizontal and vertical polarities to obtain the maximum reading on the analyzer. The turntable is also rotated throughout the 360 degrees in azimuth to determine the position of the maximum emissions. The applicable frequency range is searched using the antennas listed below. The respective antenna and preamplifier were connected to an HP 8568B Spectrum Analyzer. Preamplifiers were used for all ranges to achieve the needed dynamic range. A list of the equipment used in this test is included in Appendix A. Photographs of this test set up are included in Appendix B.

Antenna(s):

- Electro-Metrics 6505-A (.009 - 30 MHz) []
- SAS 200/540 BICONICAL (30 - 200 MHz) [X]
- EMCO 3146 LOG PERIODIC (200 - 1000 MHz) [X]
- EMCO 3115 DRG (1GHz – 18GHz) [X]
- OTHER (See Equipment Log in Appendix B) [X]



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5.0

CONCLUSIONS

The ACSS, an L-3 Communications & Thales Company, Diversity Mode-S Transponder, Model #NGT-9000, was tested in accordance with the requirements listed herein. Pass/Fail status for each test is listed in Section 5.0. At the completion of testing the EUT and support equipment were returned to representatives of ACSS, an L-3 Communications & Thales Company.



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APPENDIX A

Test Equipment Log



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11	Antenna (Small DRG)	Emco	3115	2281	Riv	R	09-Jan-13	730	09-Jan-15	OK
31	Antenna (Log Periodic)	Emco	3146	1284	Riv	R	29-Jul-13	730	29-Jul-15	OK
364	Pre-Amp	Miteq	afd304008040	121391	Riv	R	24-Oct-14	365	24-Oct-15	OK
1233	Spectrum Analyzer	HP	8568B	2732A03600	Riv	R	24-Oct-14	365	24-Oct-15	OK
1234	Spec Analyzer Display	HP	85662A	2648A15552	Riv	R	24-Oct-14	365	24-Oct-15	OK
1430	RF Pre-Selector	H/P	85685A	2724A00659	Riv	R	24-Oct-14	365	24-Oct-15	OK
1698	Pre-Amp	Miteq	AFS4-08001800-35-LN	378064	Riv	R	23-Oct-14	365	23-Oct-15	OK
1758	Antenna (Bicon)	AH Systems	SAS-200/540	524	Riv	R	10-Sep-13	720	10-Sep-15	OK
1760	Pre-Amp (called ZFL)	Mini-Circuits	ZFL-2000	8350	Riv	R	22-Jan-14	365	22-Jan-15	OK
1874	Cable	DNB	Helix	11874	Riv	R	16-Aug-14	365	16-Aug-15	OK
1875	Cable	DNB	RG214	11875	Riv	R	16-Aug-14	365	16-Aug-15	OK
1880	Cable	DNB	NMN	11880	Riv	R	12-Aug-14	365	12-Aug-15	OK
1965	Quasi-Peak Adapter	HP	85650A	2043A00277	Riv	R	24-Oct-14	365	24-Oct-15	OK
2047	Directional Coupler	HP	5080-0312	1144A00274	Ful	R	21-Jul-14	365	21-Jul-15	OK
2264	Spectrum Analyzer	Agilent	E4407B	MY45103462	Riv	R	07-Aug-14	365	07-Aug-15	OK
3066	Directional Coupler	HP	11691D	1212A01914	Ful	F	31-Aug-14	365	31-Aug-15	OK
3635	Attenuator	Inmet	18N50W	13635	Ful	F	31-Aug-15	365	31-Aug-15	OK



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APPENDIX B

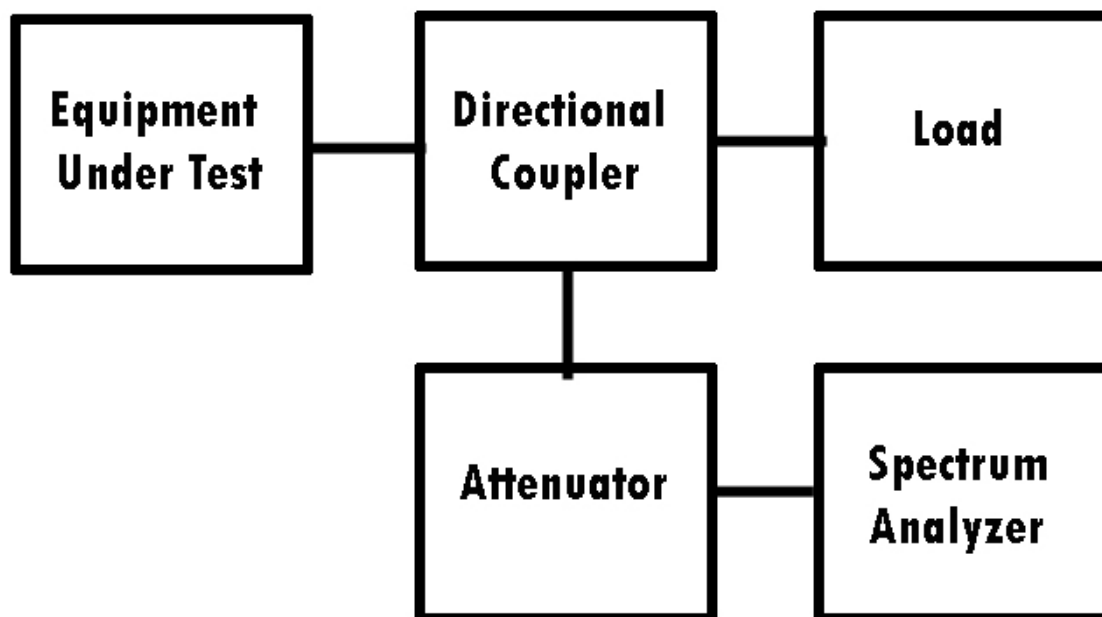
Photographs



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Block diagram Test Setup





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Photos

Radiated Emissions-Bicon

Notes: 30MHz – 200 MHz





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Photos

Radiated Emissions-Bicon

Notes: 30MHz – 200 MHz





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Photos

Radiated Emissions – Log Periodic

Notes: 200MHz – 1000MHz





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Radiated Emissions – Log Periodic

Notes: 200MHz – 1000MHz





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APPENDIX C

Test Data

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RF Power Output

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1046 87.131
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 3635, 2047, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

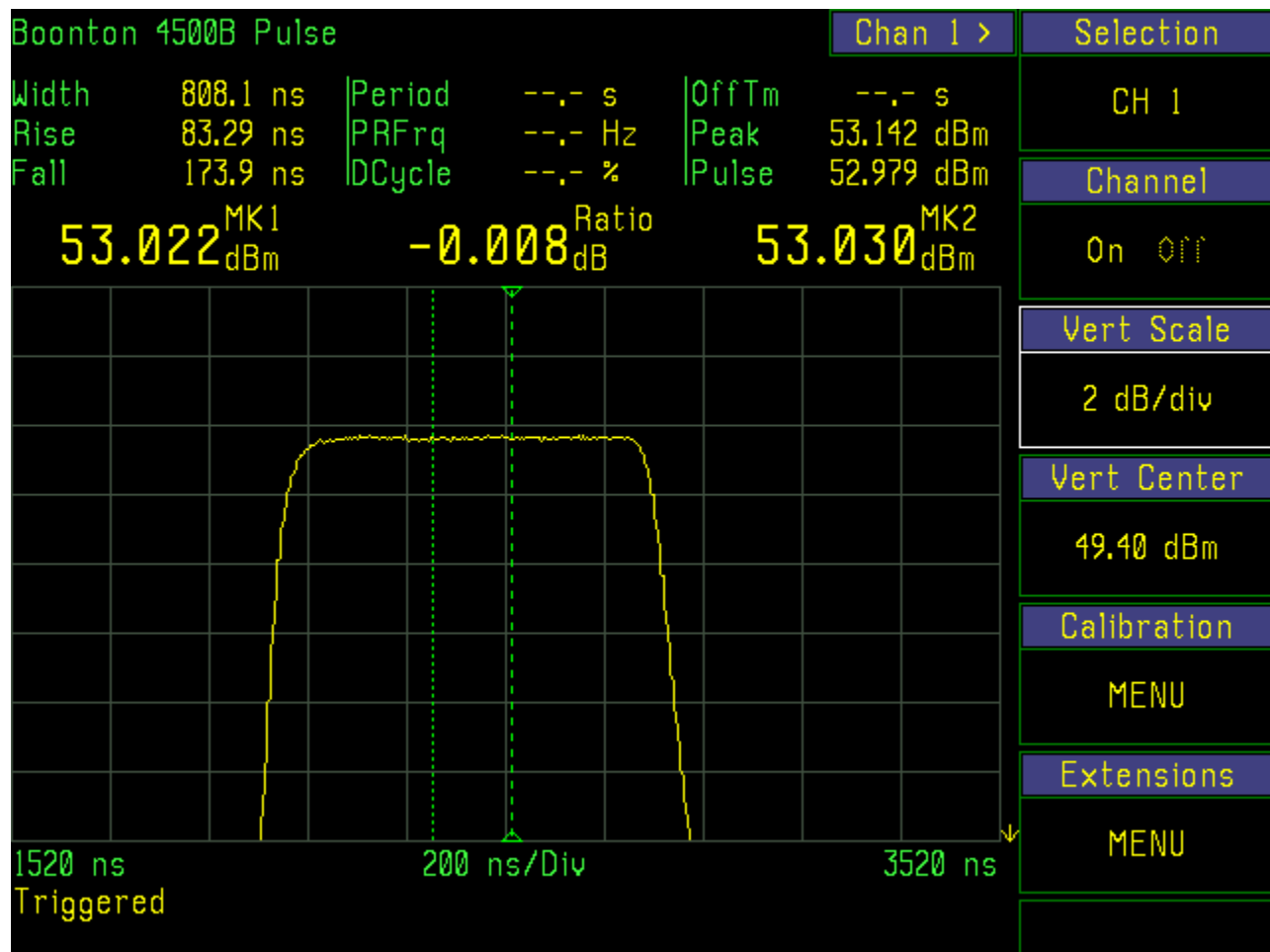
Modulation		Measurement	Top Antenna	Bottom Antenna
TAS	ATCRBS	Power Output (dBm)	52.5	N/A
		Frequency (MHz)	1030	N/A
XPDR	Mode S	Power Output (dBm)	52.8	53
		Frequency (MHz)	1090	1090
	ATCRBS	Power Output (dBm)	52.7	52.8
		Frequency (MHz)	1090	1090

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Modulation Characteristics

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1046 87.131
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 15387, 1773		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

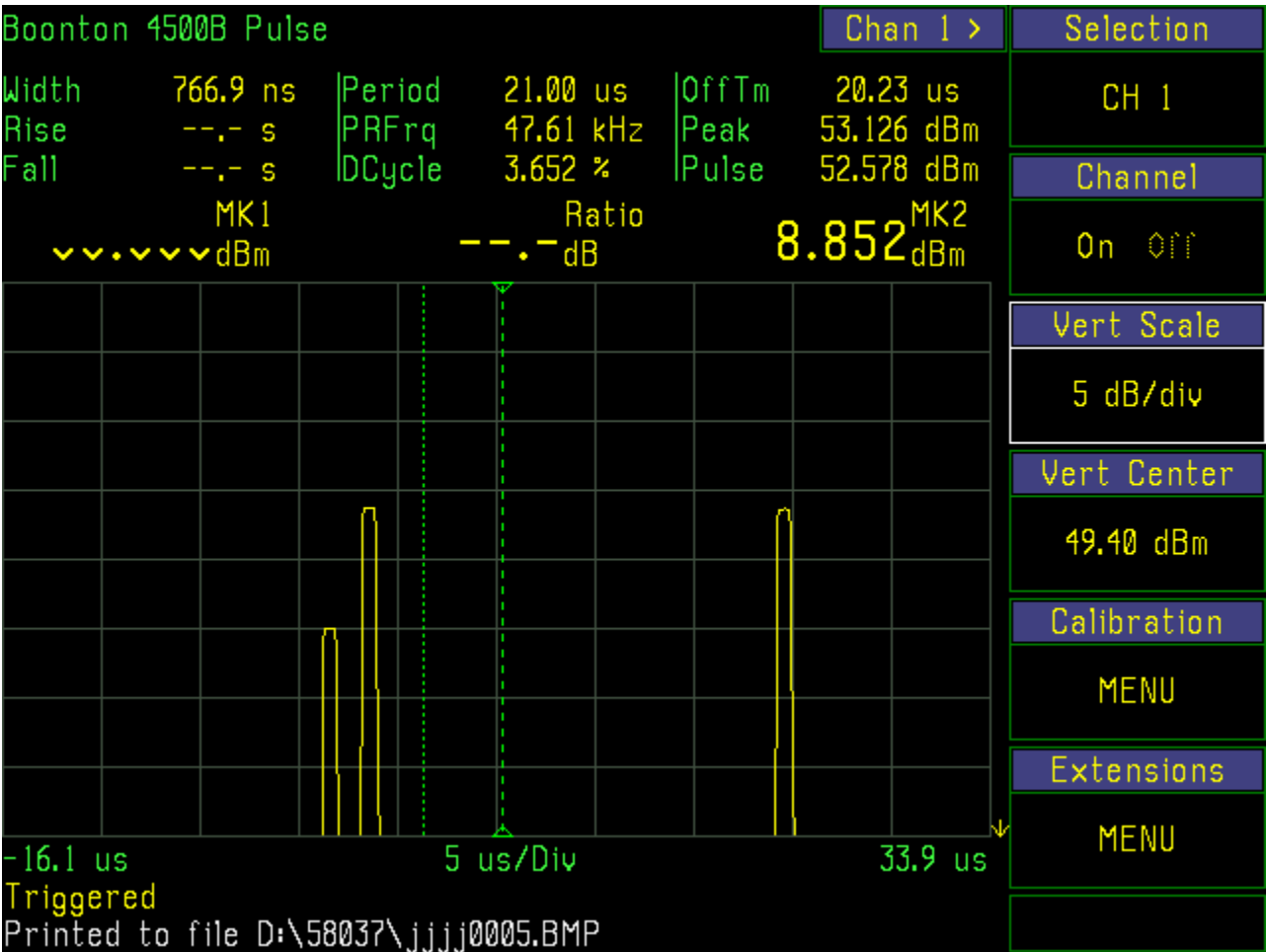
ATCRBS Interrogation single pulse characteristics



Modulation Characteristics

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1046 87.131
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 15387, 1773		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

ATCRBS Interrogation with S1

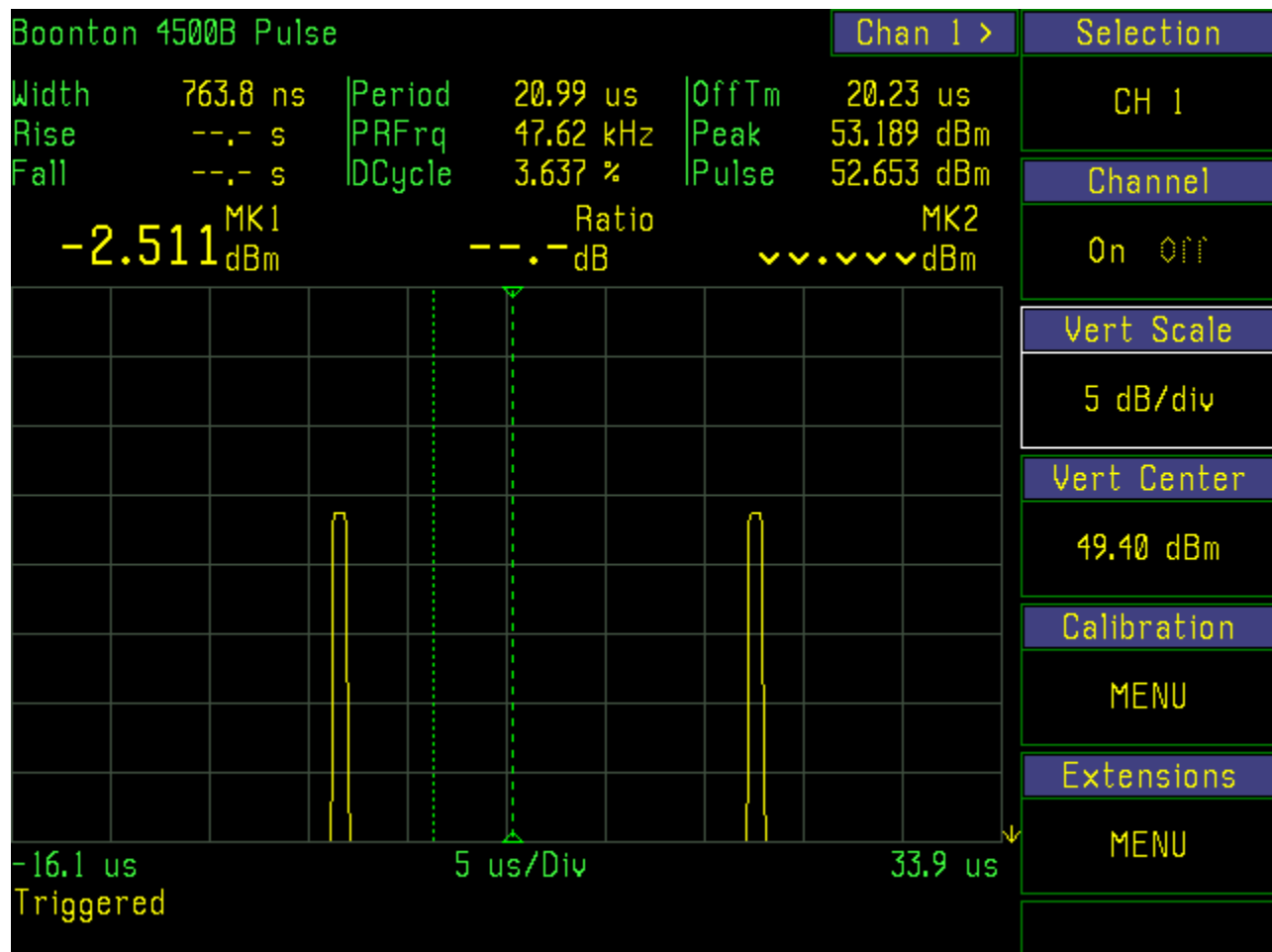


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Modulation Characteristics

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1046 87.131
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 15387, 1773		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

ATCRBS interrogation without S1





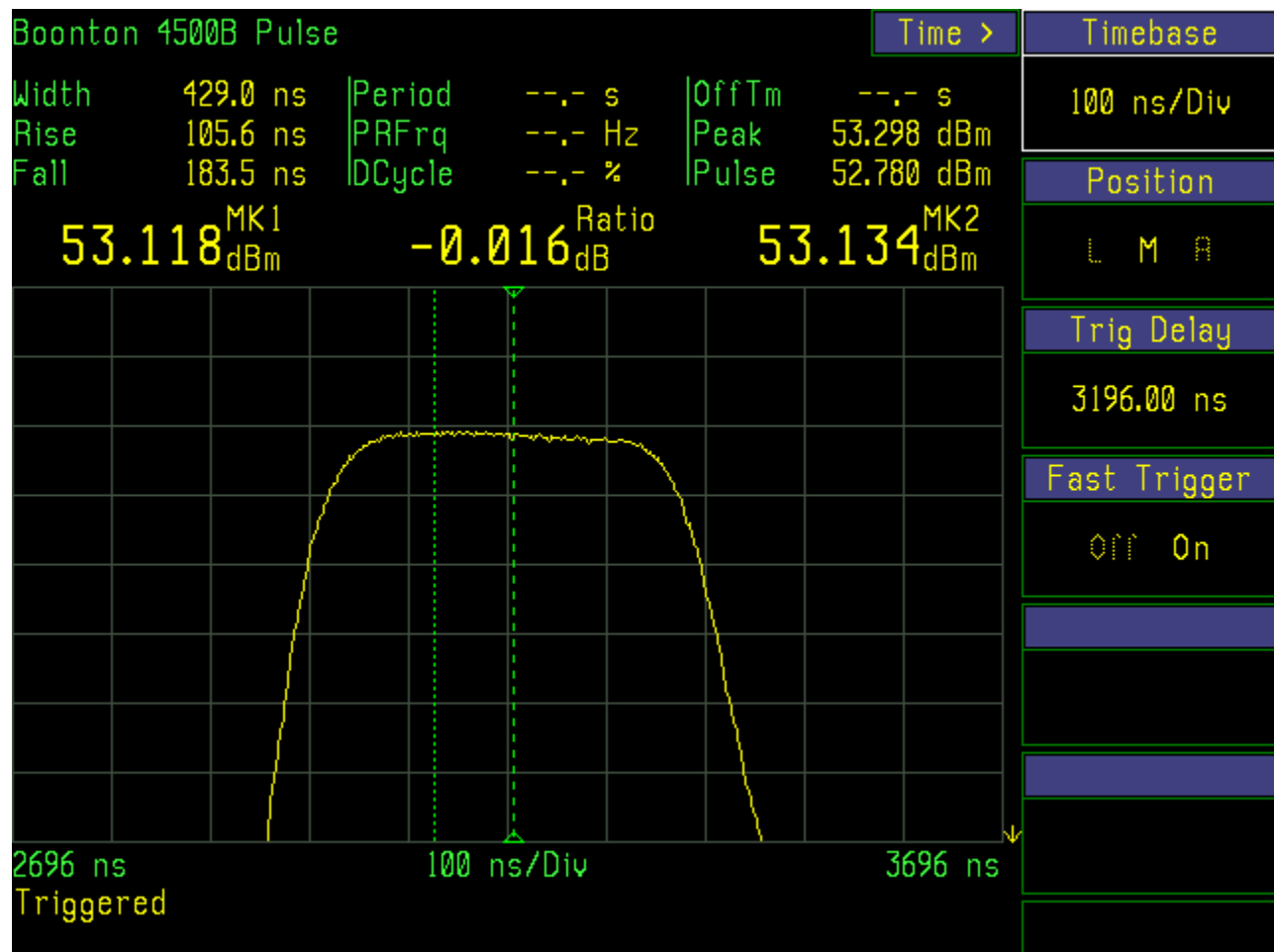
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Modulation Characteristics

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1046 87.131
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 15387, 1773		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

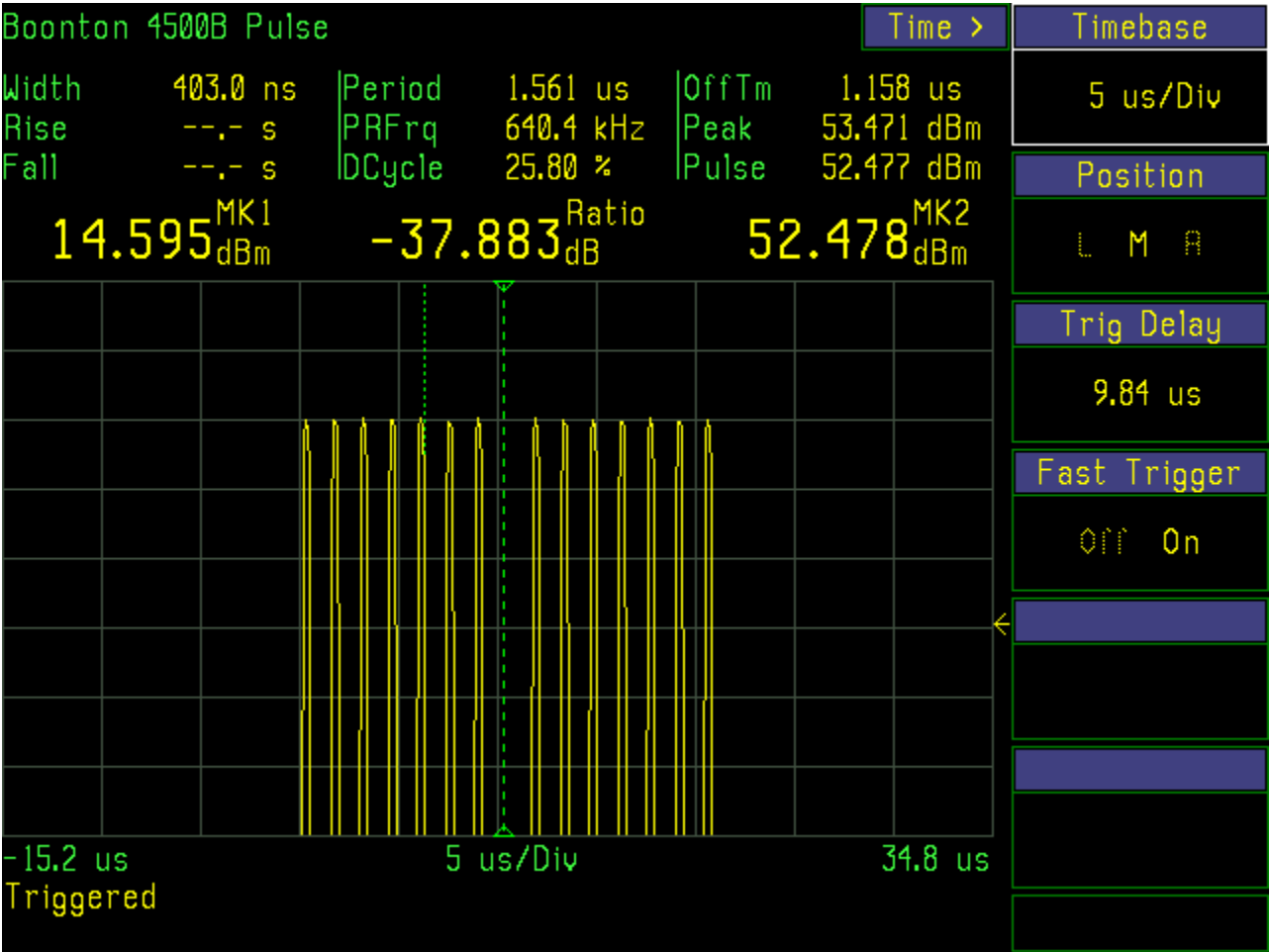
ATCRBS reply single pulse characteristics



Modulation Characteristics

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1046 87.131
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 15387, 1773		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

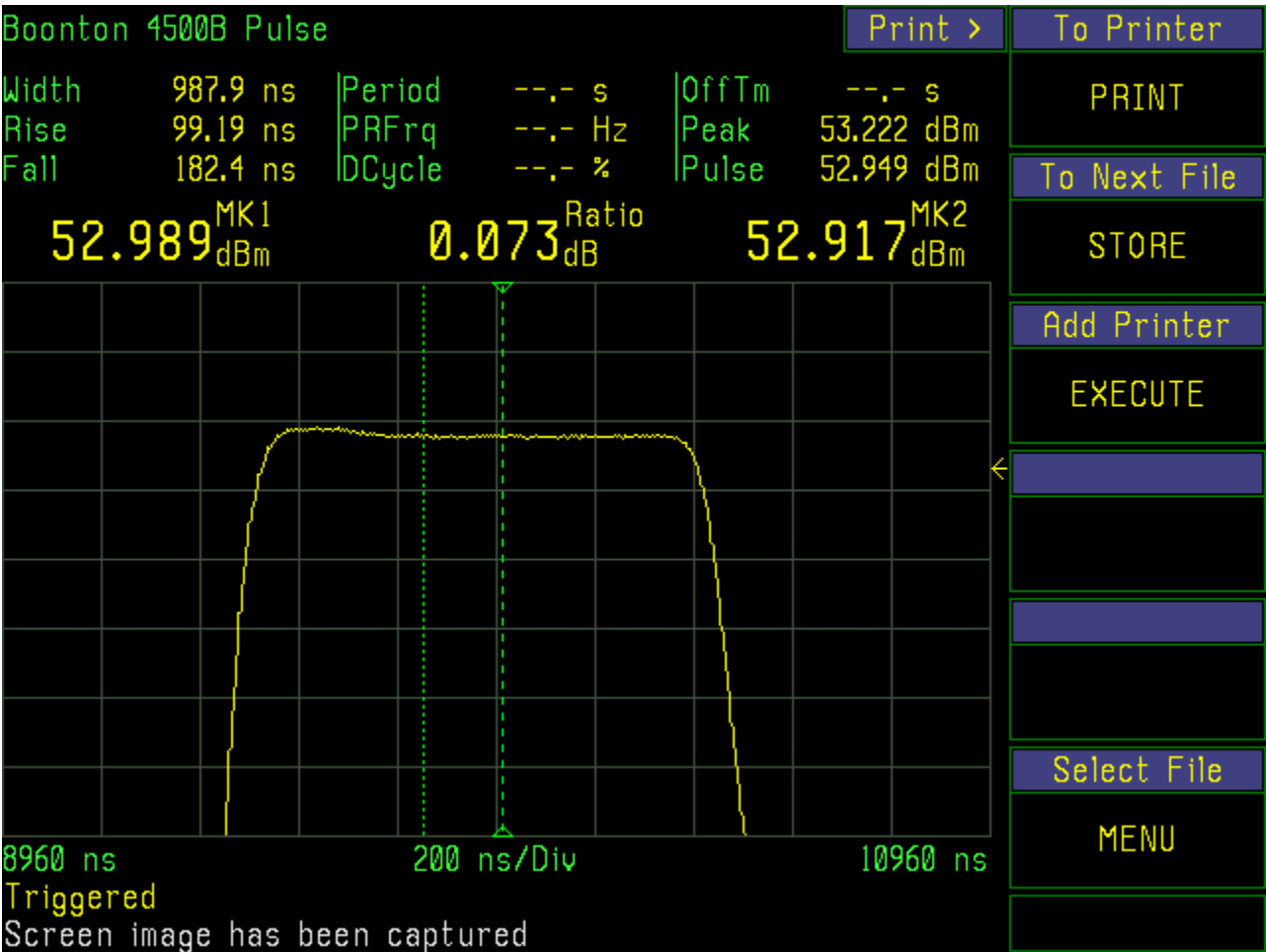
ATCRBS reply



Modulation Characteristics

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1046 87.131
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 15387, 1773		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Mode S double PPM

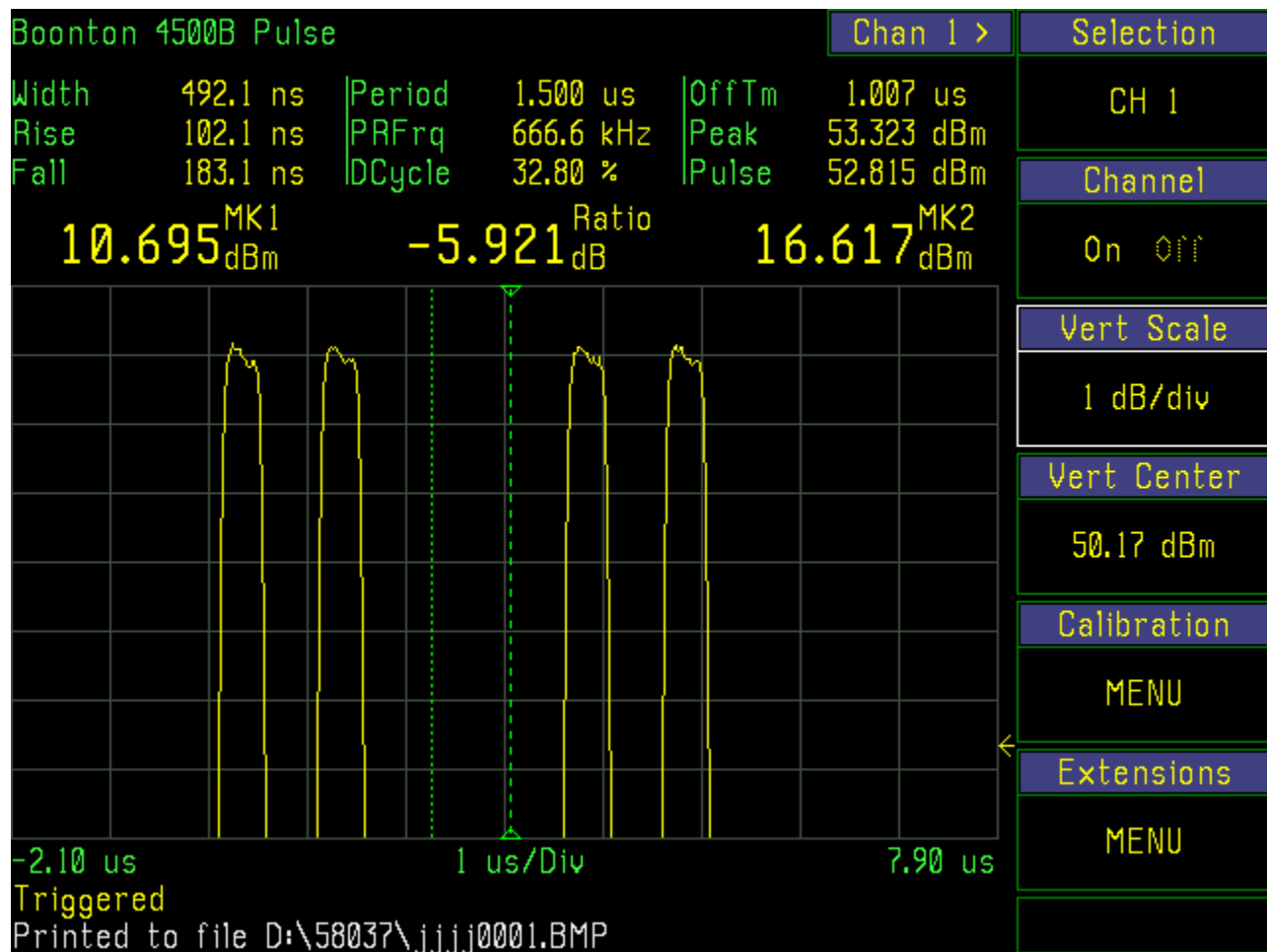


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Modulation Characteristics

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1046 87.131
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 15387, 1773		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Mode S reply preamble





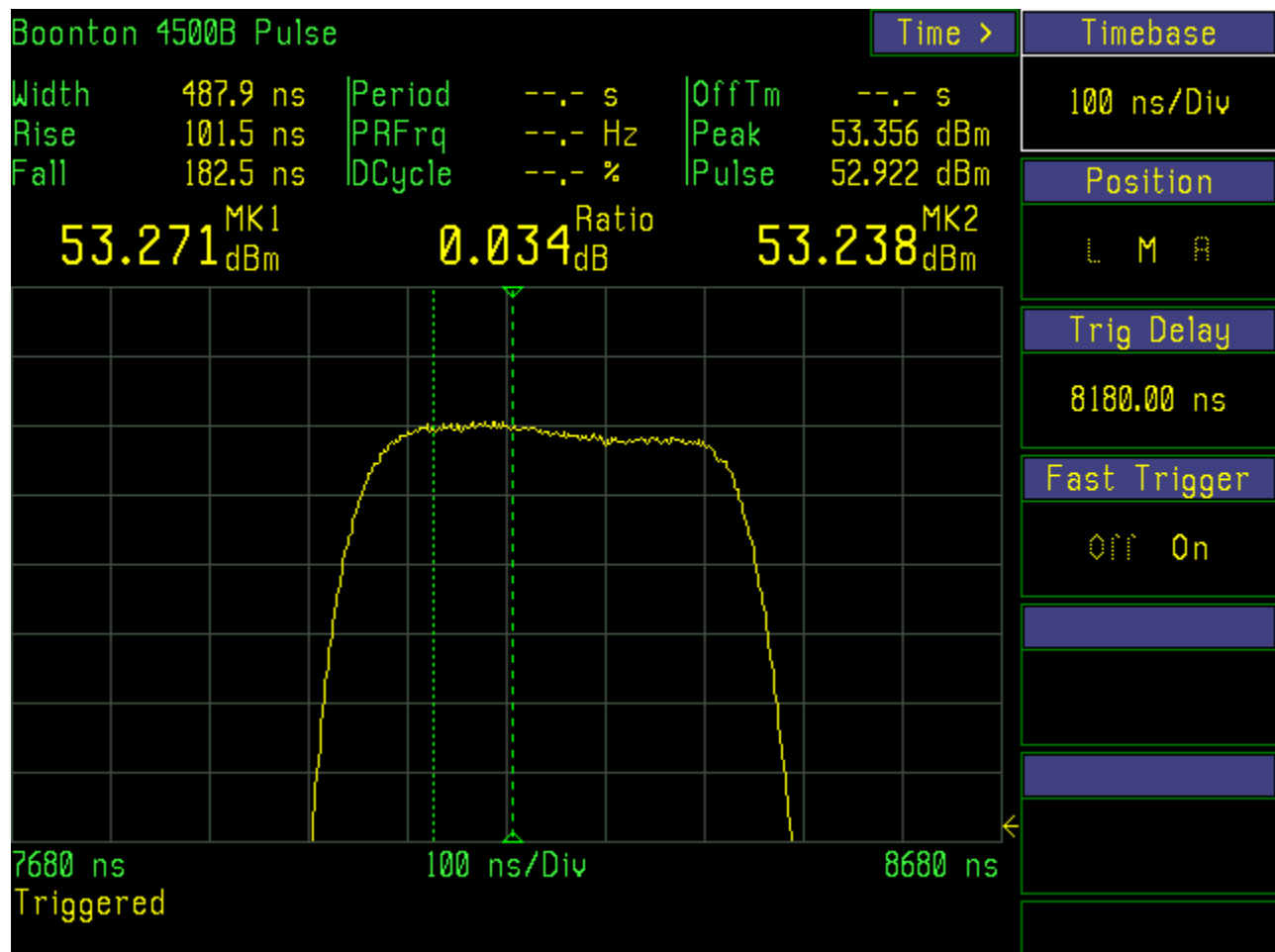
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Modulation Characteristics

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Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 15387, 1773		
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Mode S reply single pulse characteristics





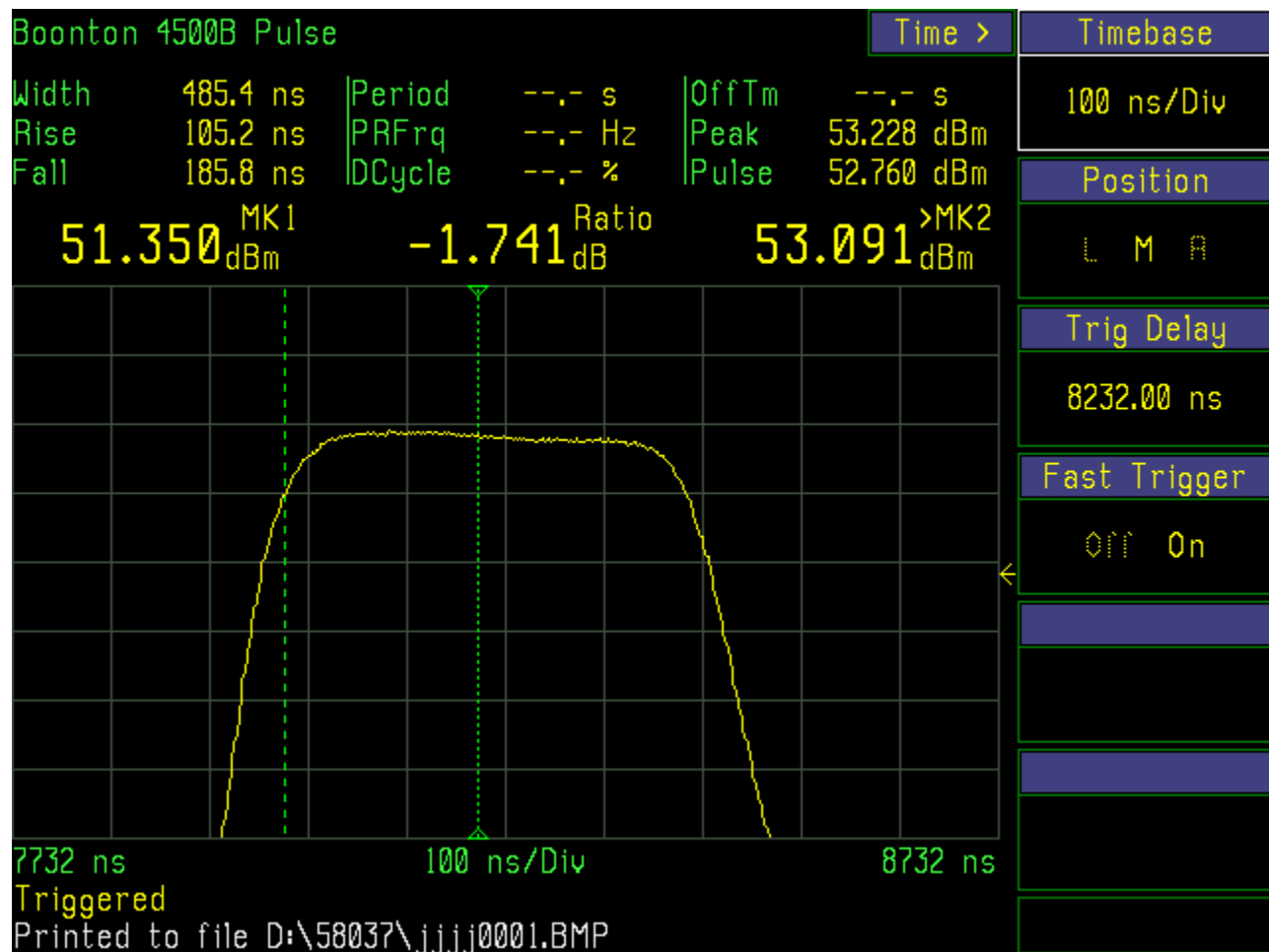
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Modulation Characteristics

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Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 15387, 1773		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Mode S single PPM

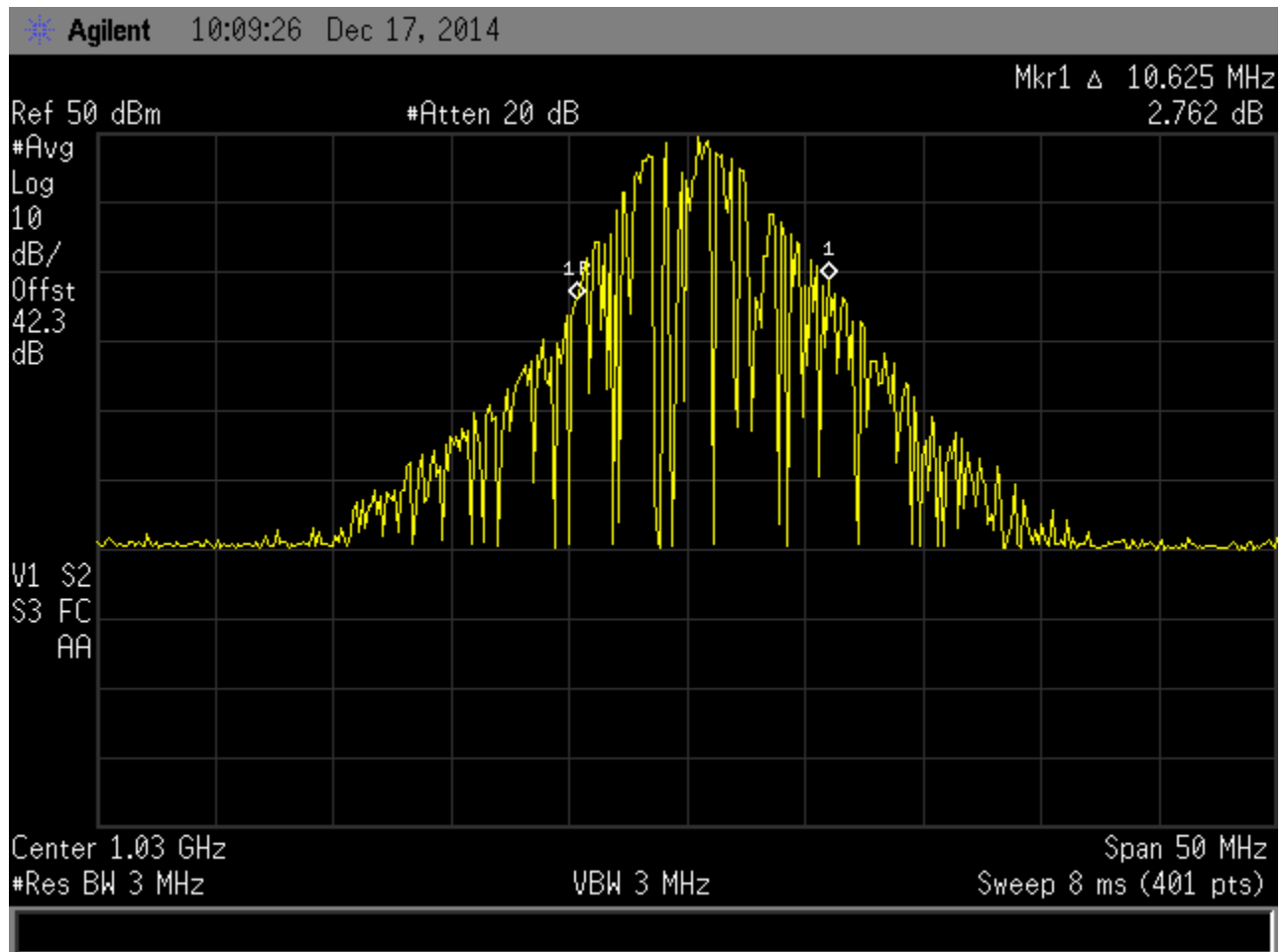


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Occupied Bandwidth

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Occupied Bandwidth 20dBc TAS ATCRBS top port: 10.625MHz

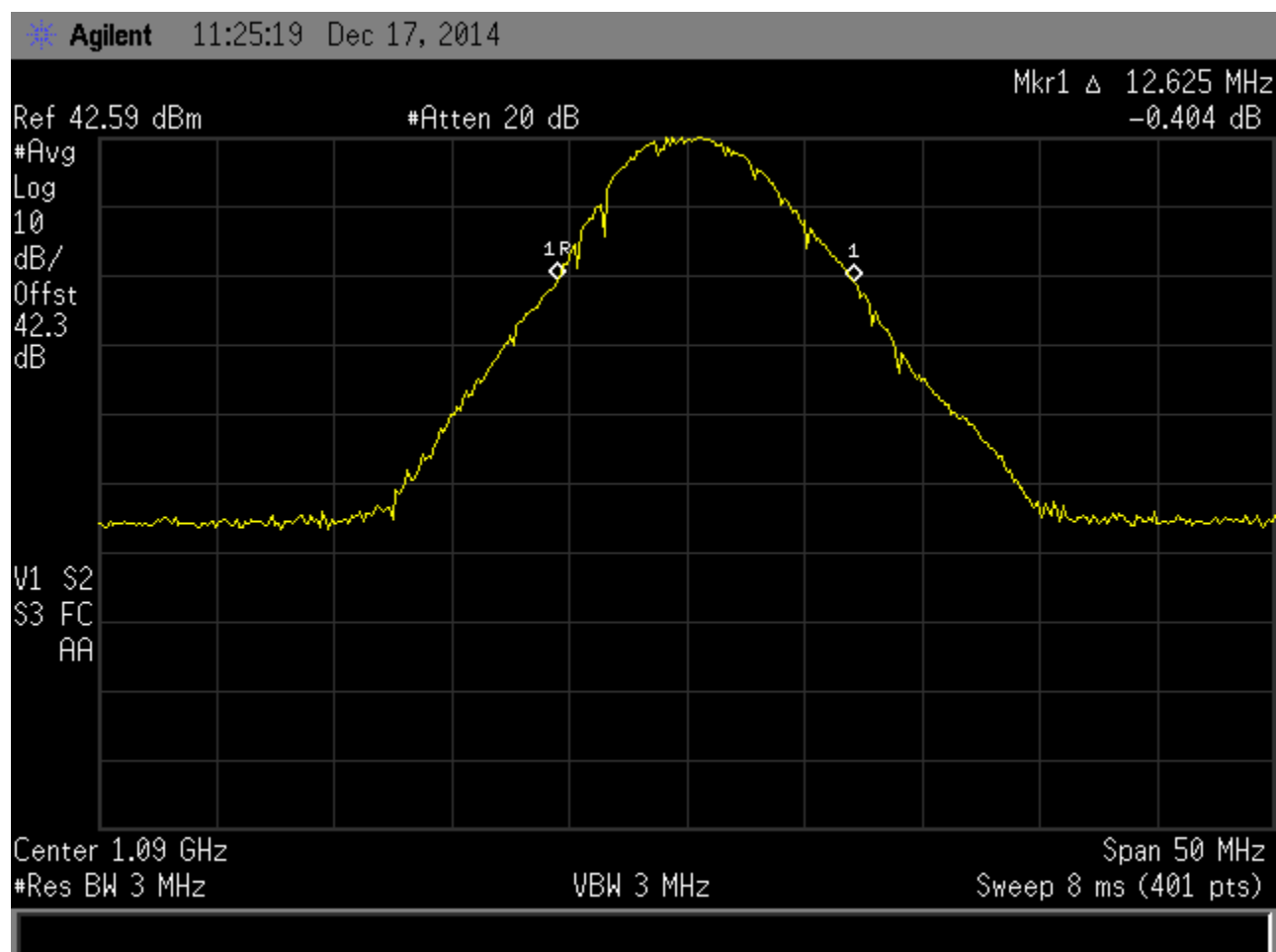


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Occupied Bandwidth

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Occupied Bandwidth 20dBc XPDR ATCRBS bottom port: 12.65MHz

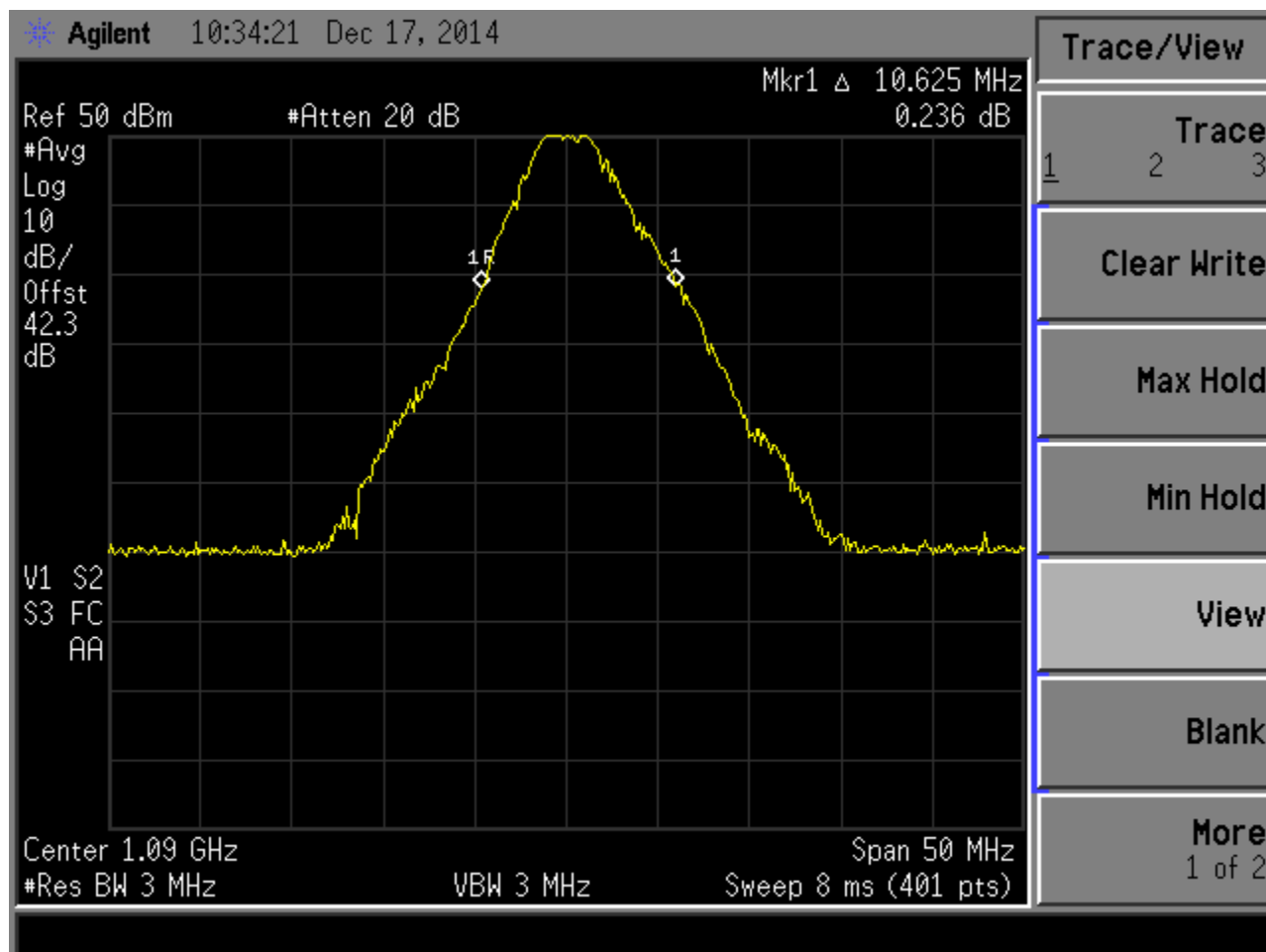


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Occupied Bandwidth

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Occupied Bandwidth 20dBc XPDR Mode S bottom port: 10.65MHz

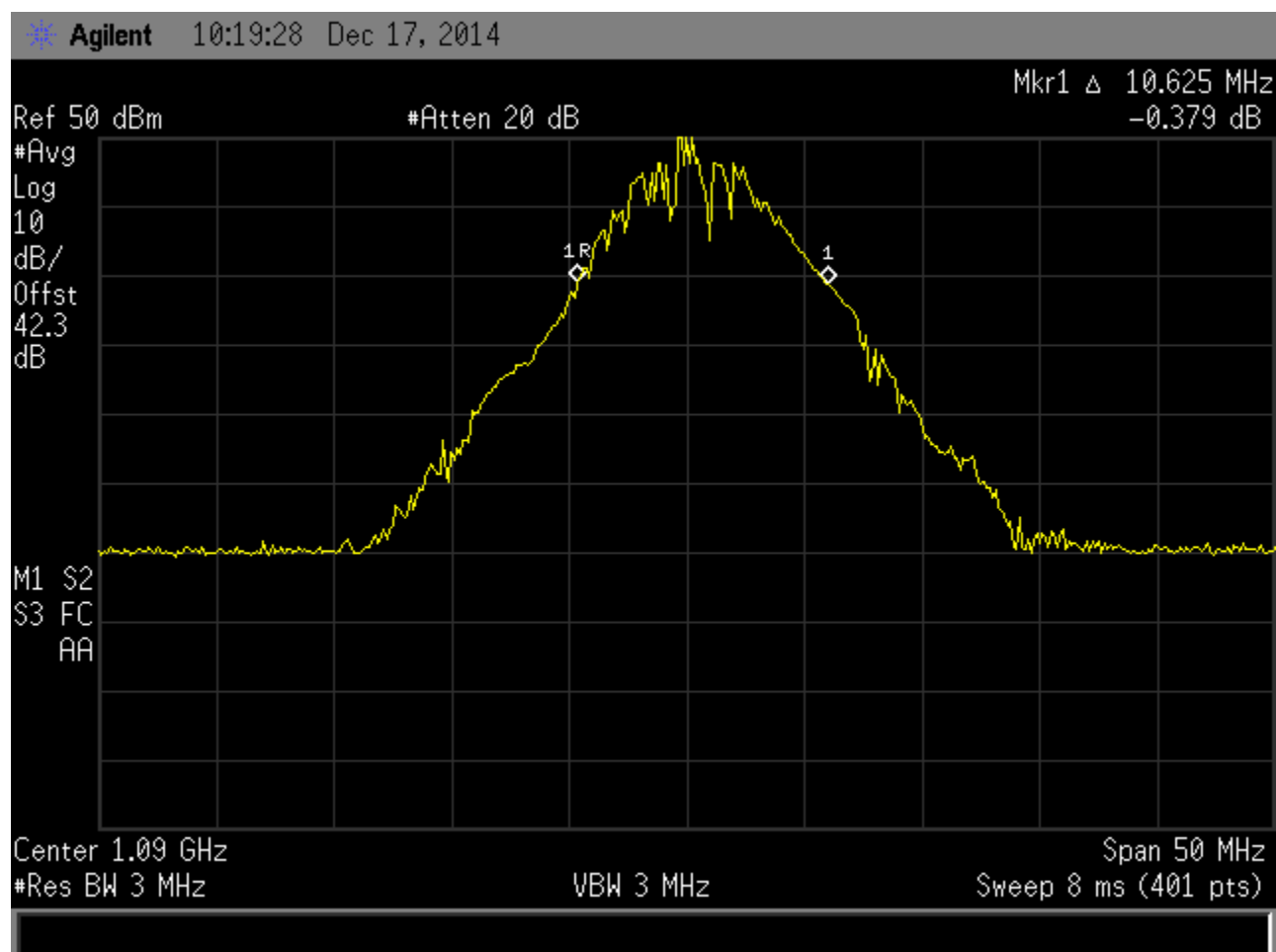


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Occupied Bandwidth

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Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s:2047, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Occupied Bandwidth 20dBc XPDR Mode S top port: 10.625MHz

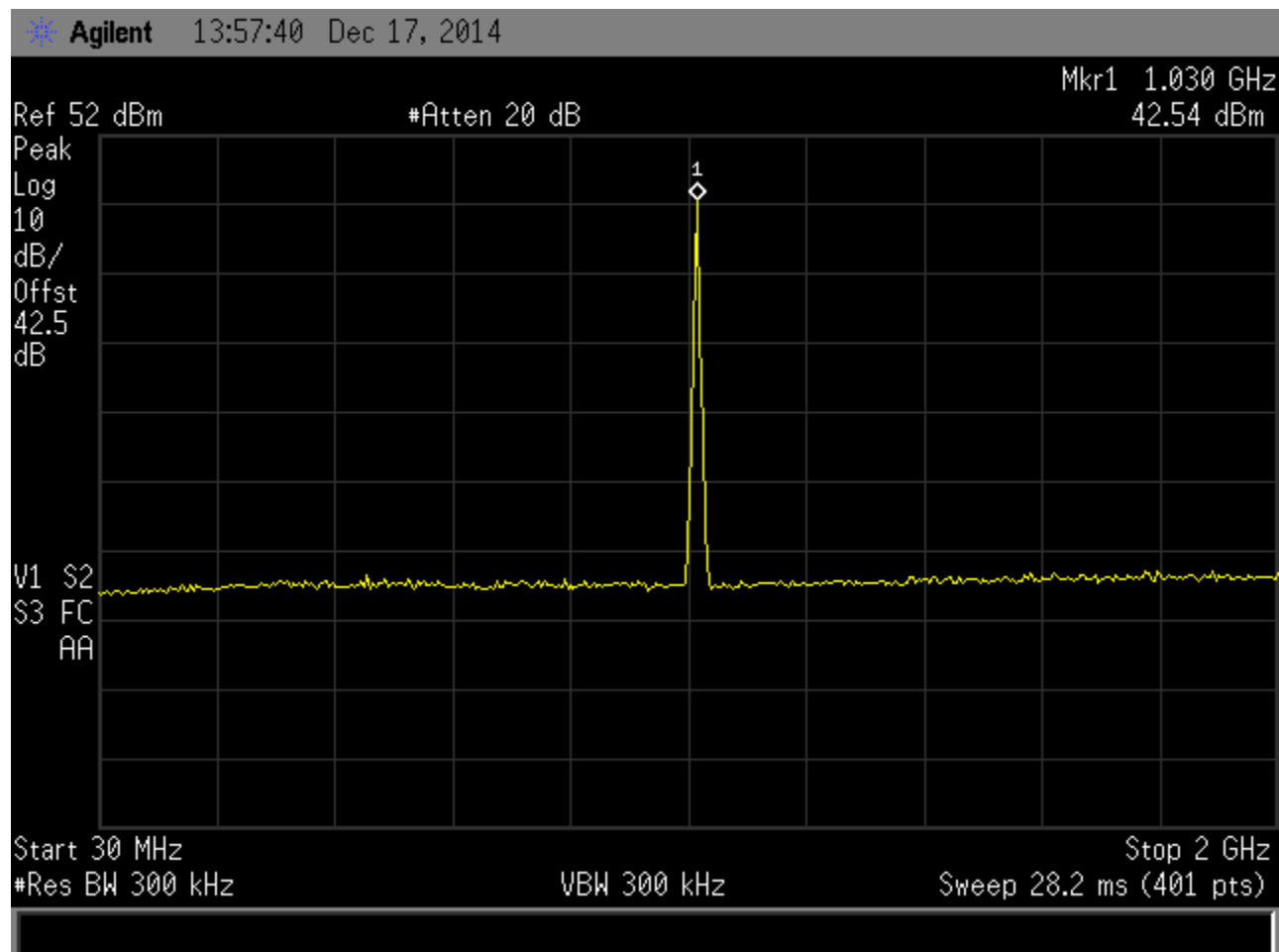


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

TAS conducted spurious 30MHz – 2GHz

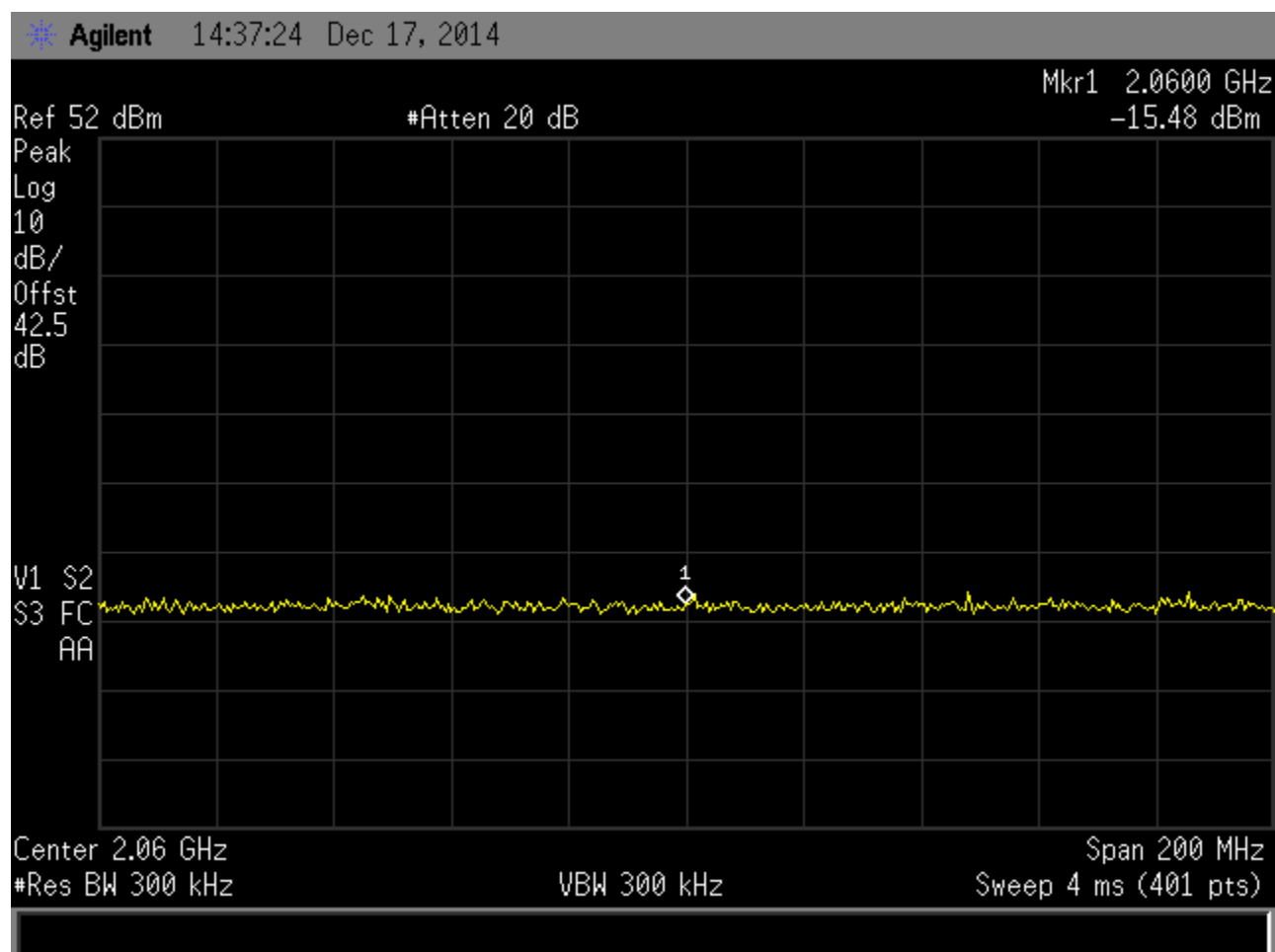


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

TAS Conducted Spurious 2060MHz

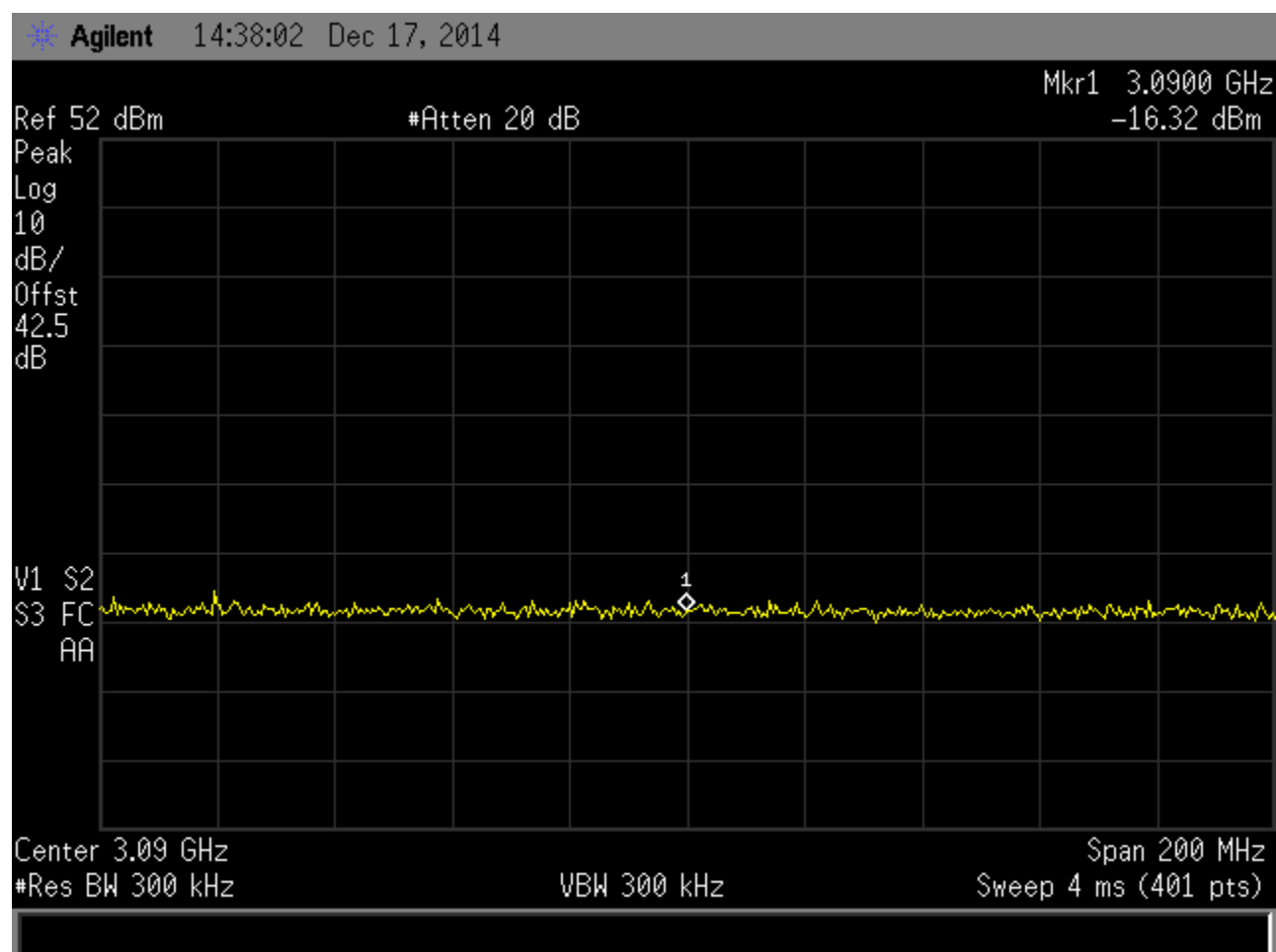


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

TAS Conducted Spurious 3090MHz

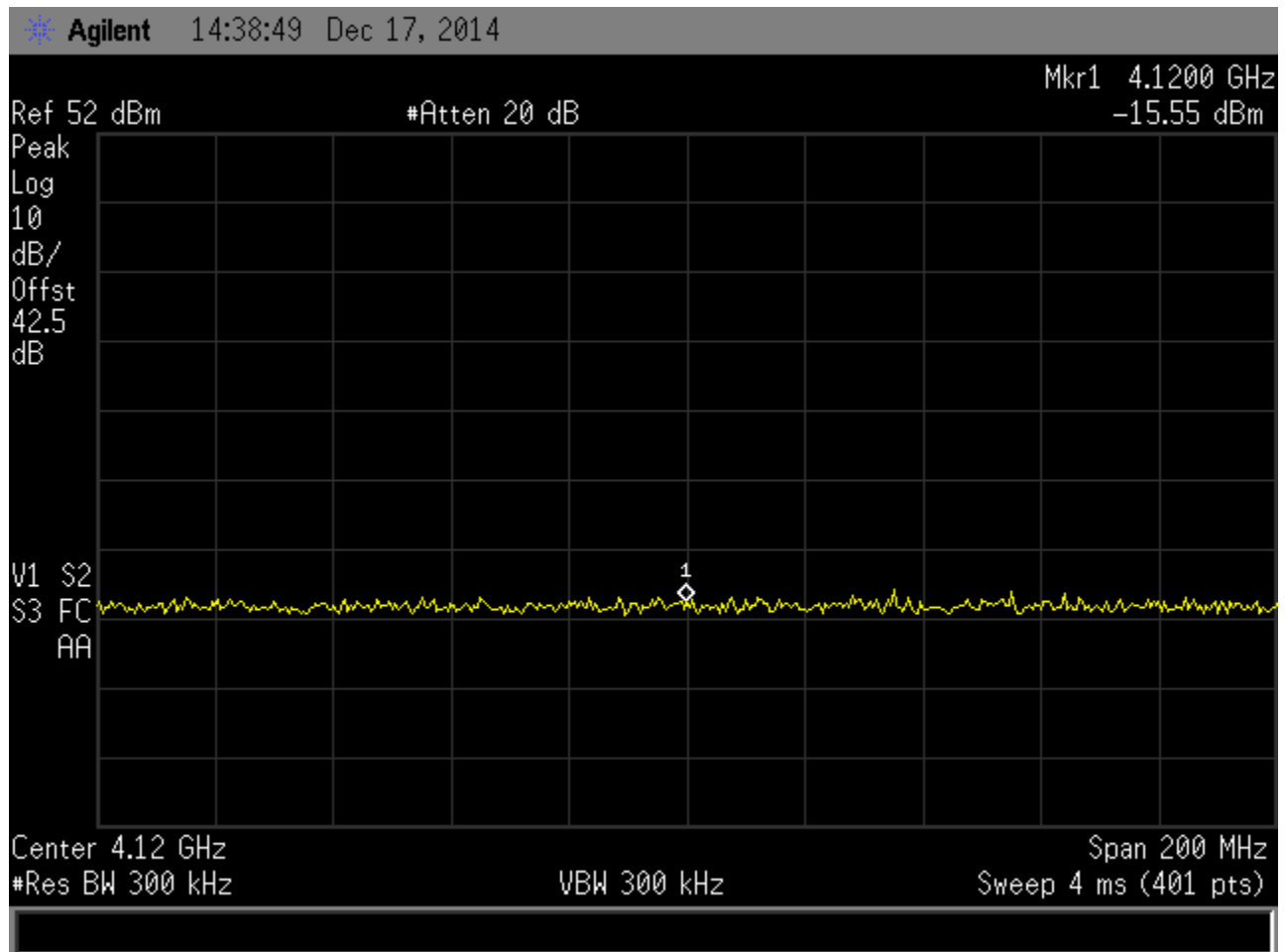


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

TAS Conducted Spurious 4120MHz

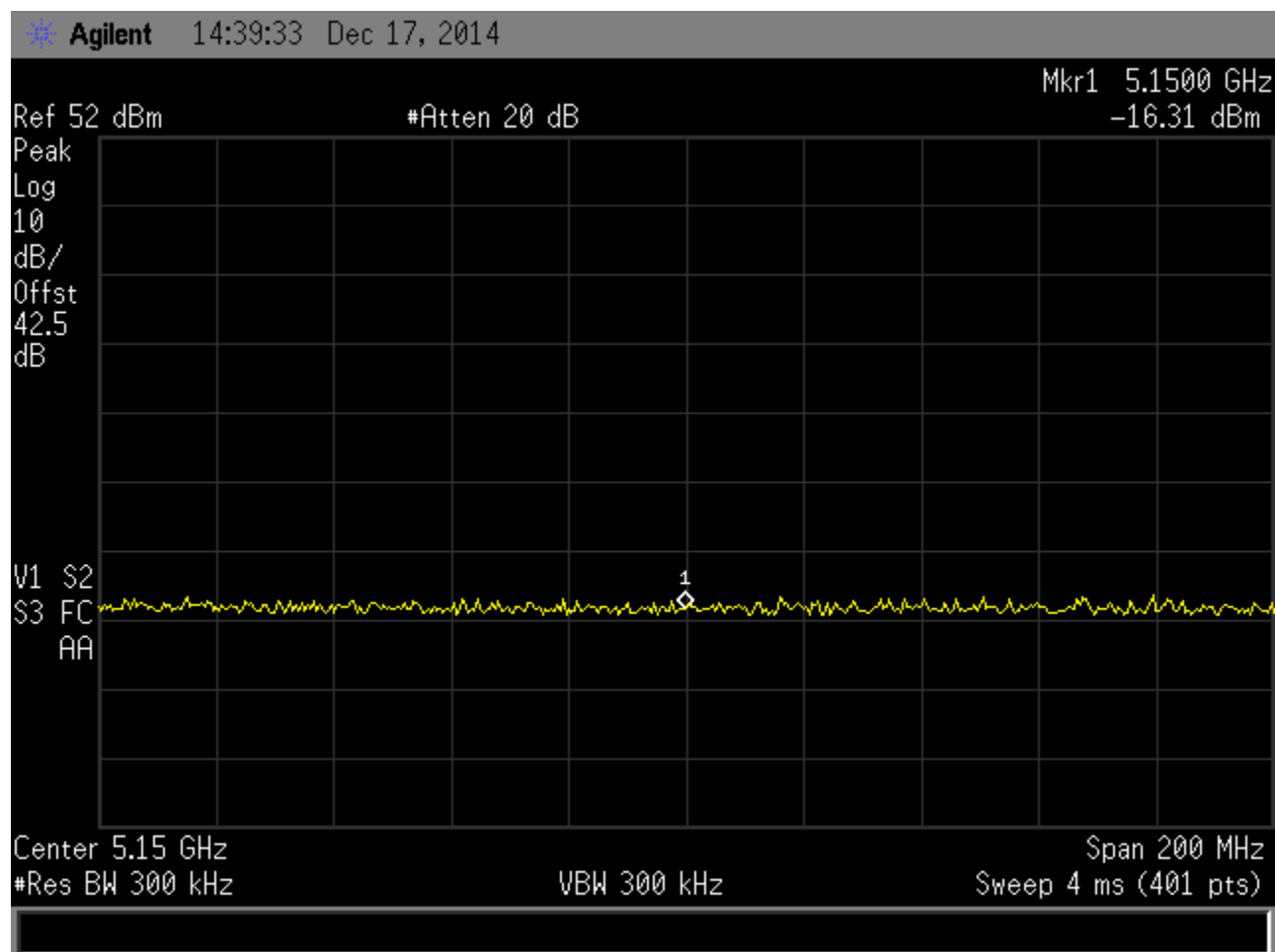


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

TAS Conducted Spurious 5150MHz

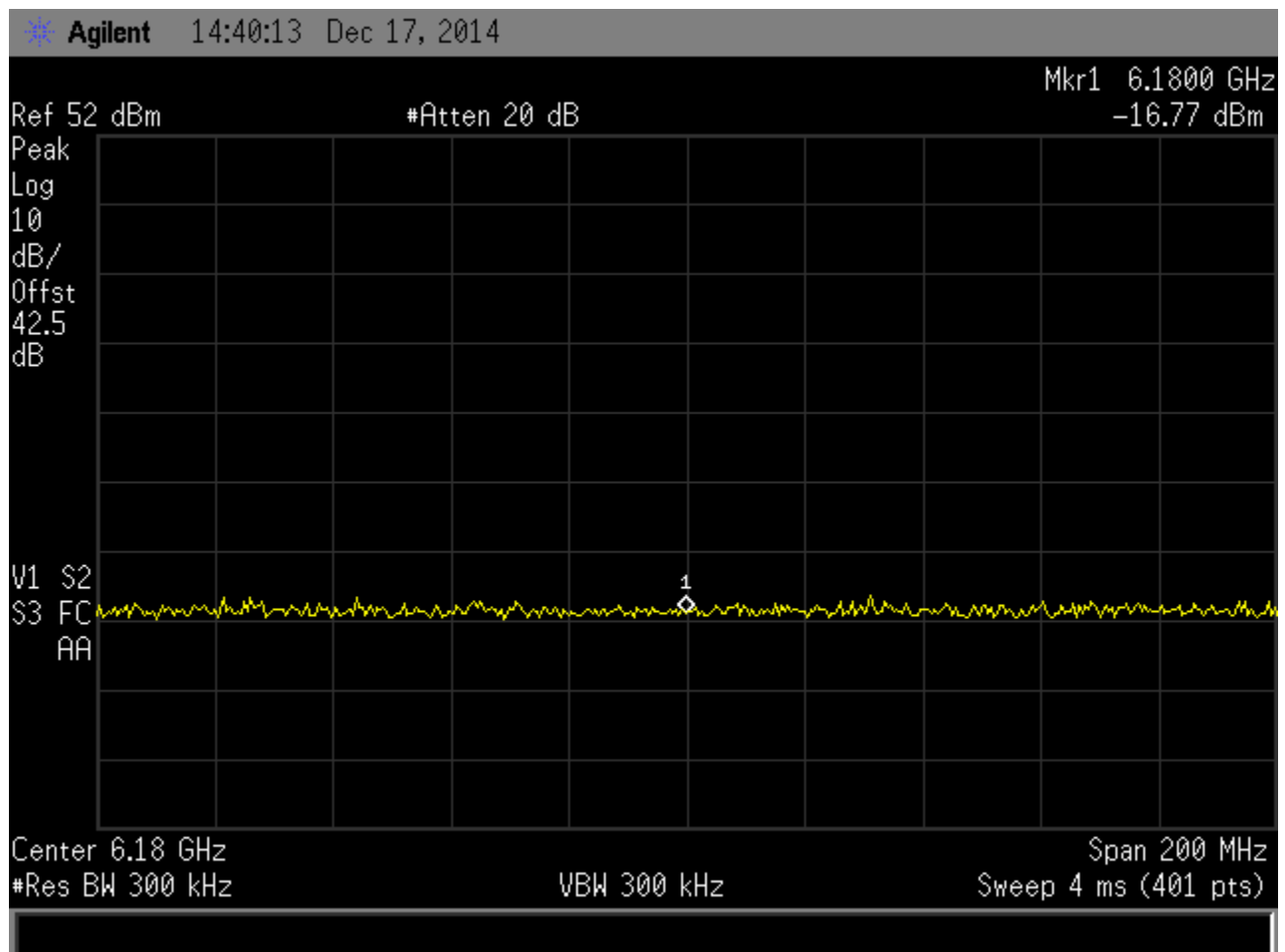


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

TAS Conducted Spurious 6180MHz

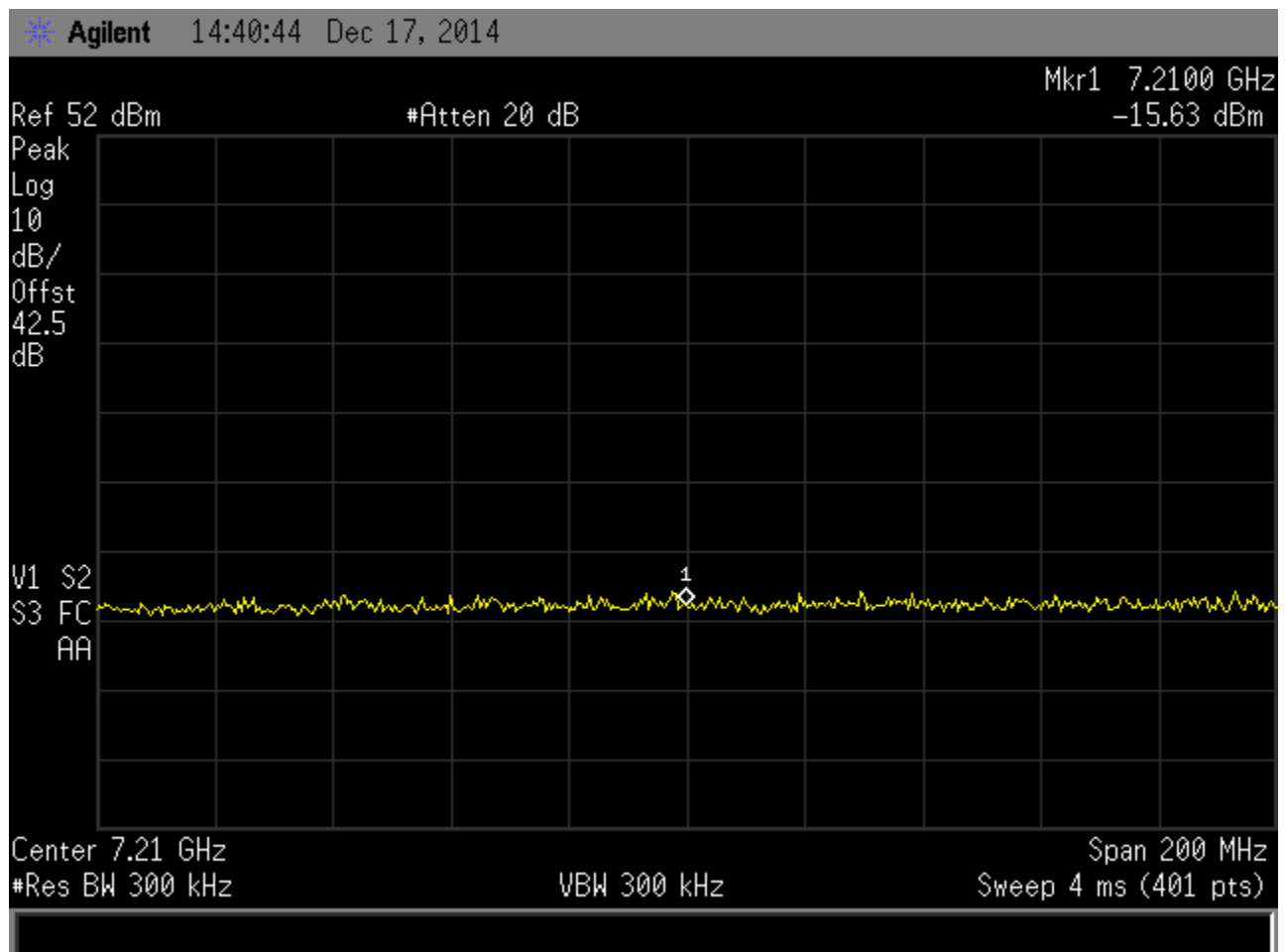


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

TAS Conducted Spurious 7210MHz

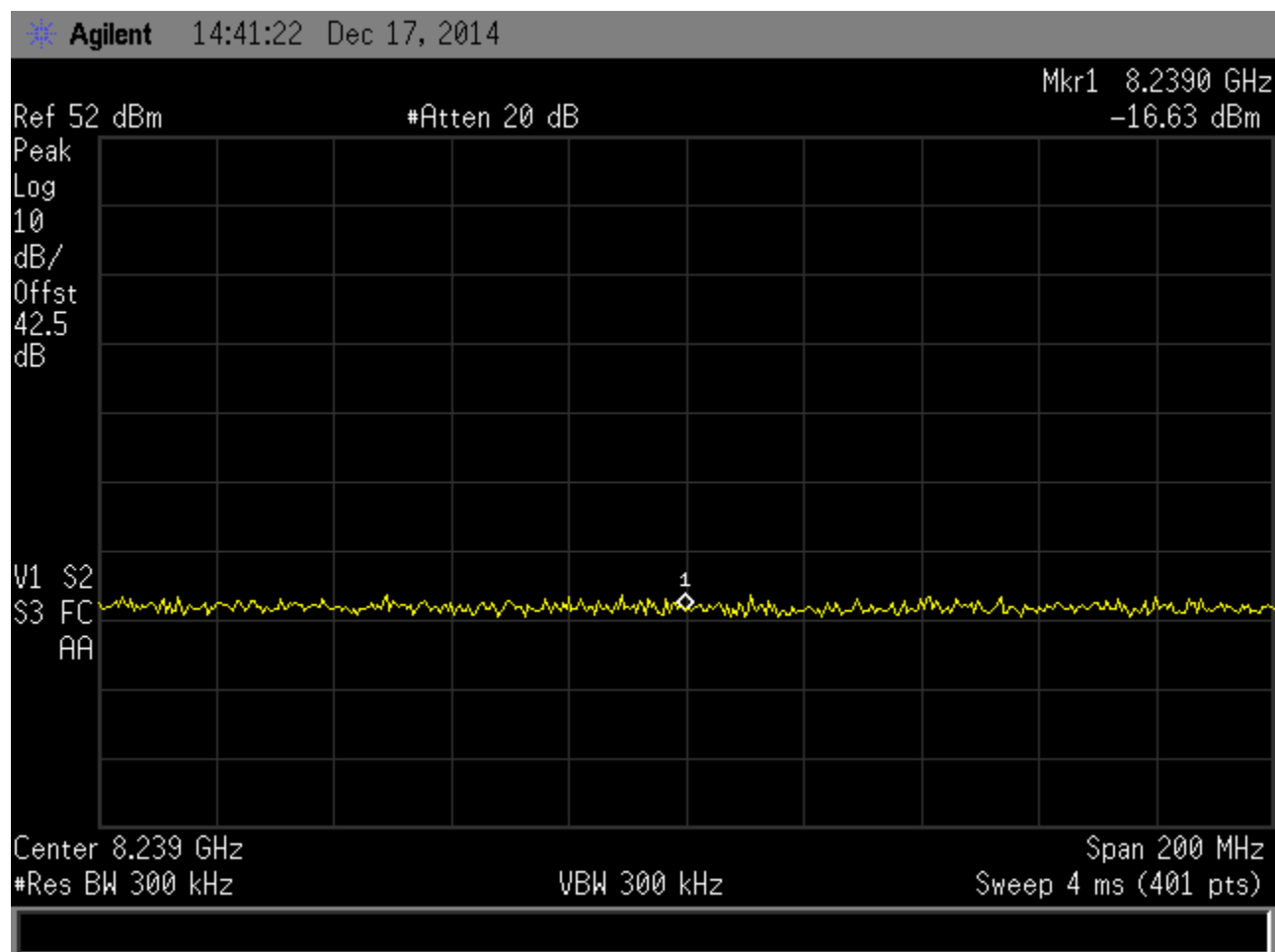


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

TAS Conducted Spurious 8240MHz

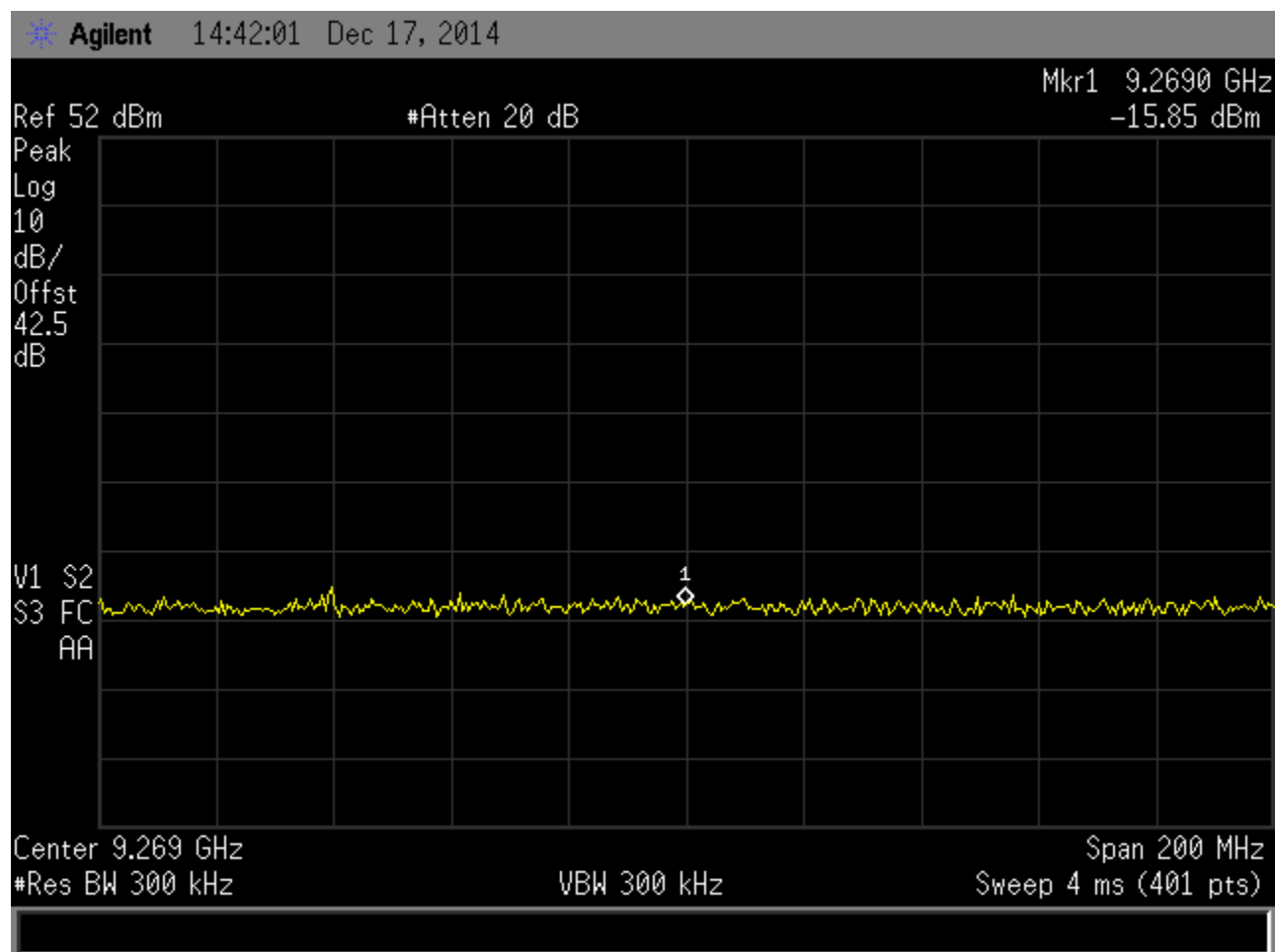


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

TAS Conducted Spurious 9270MHz

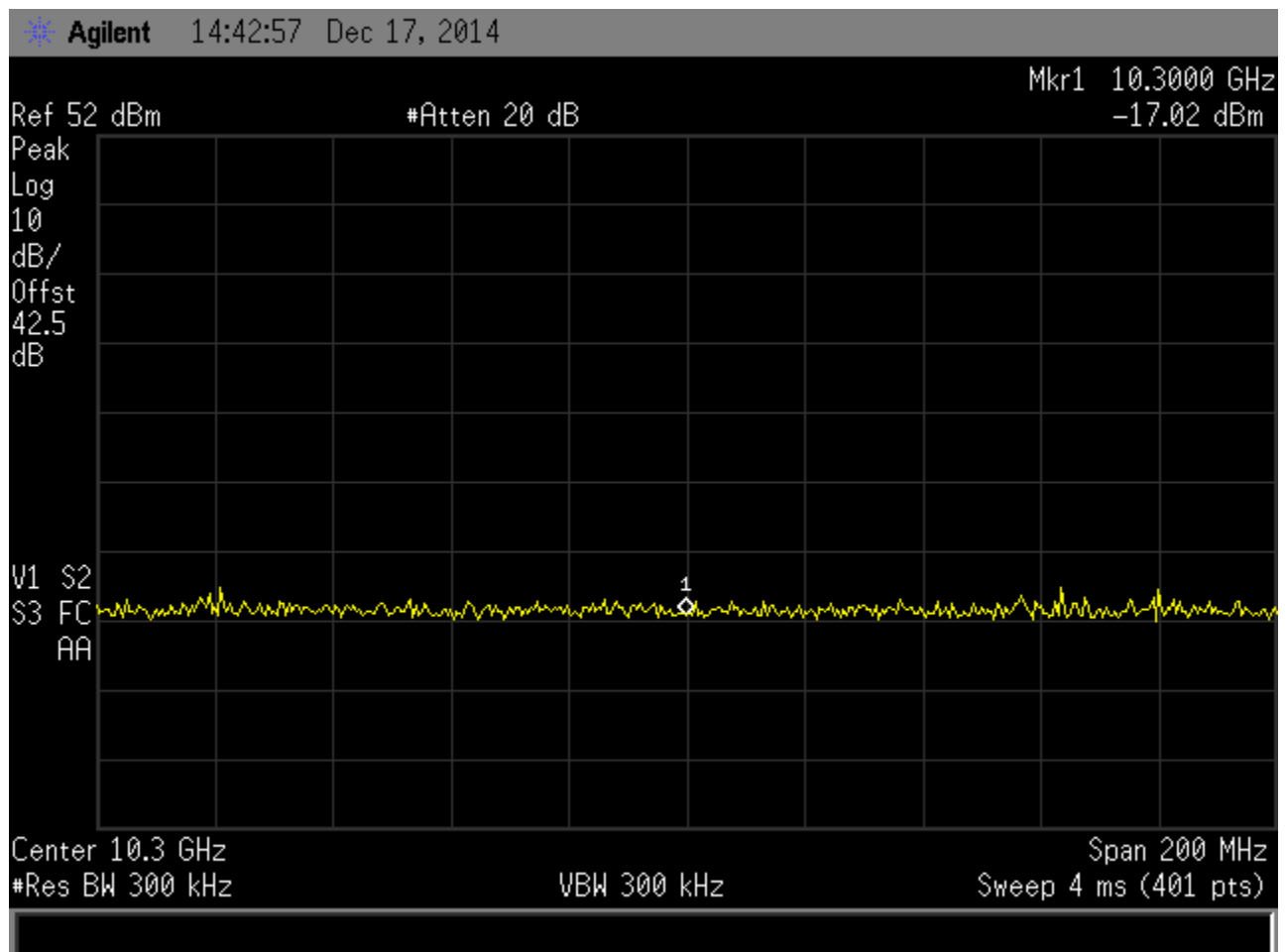


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

TAS Conducted Spurious 10300MHz

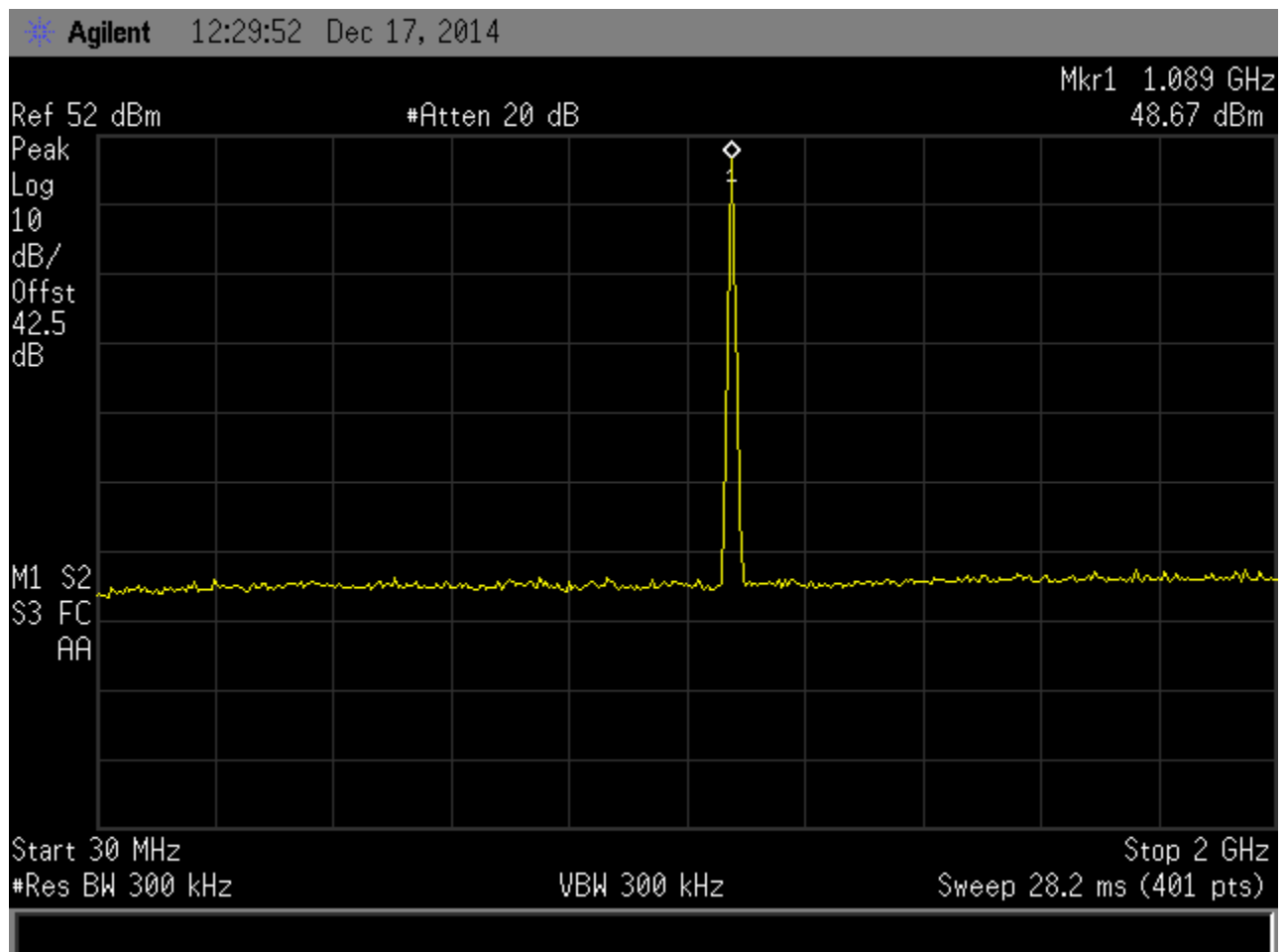


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious top port 30MHz – 2GHz

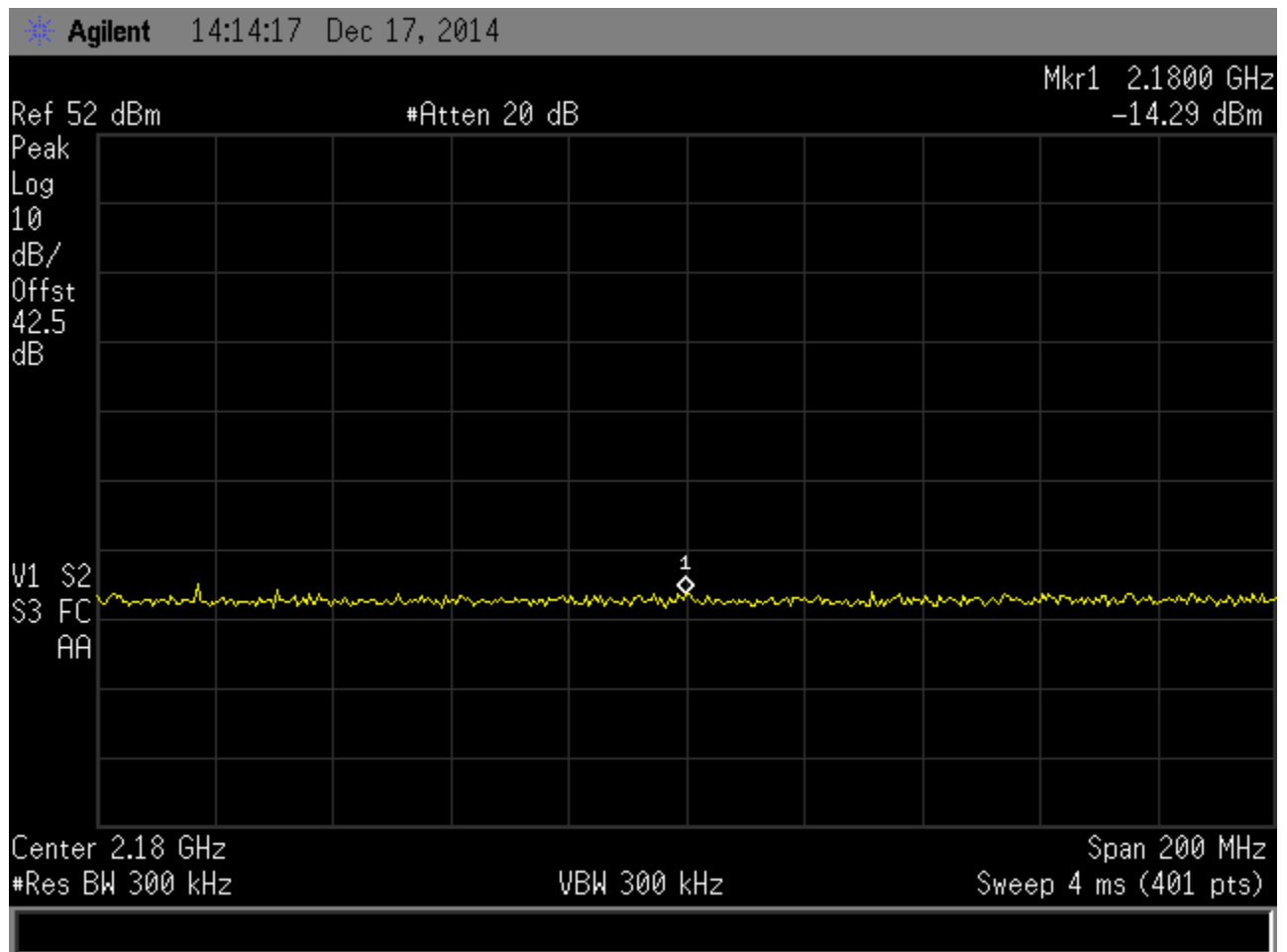


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious top port 2180MHz

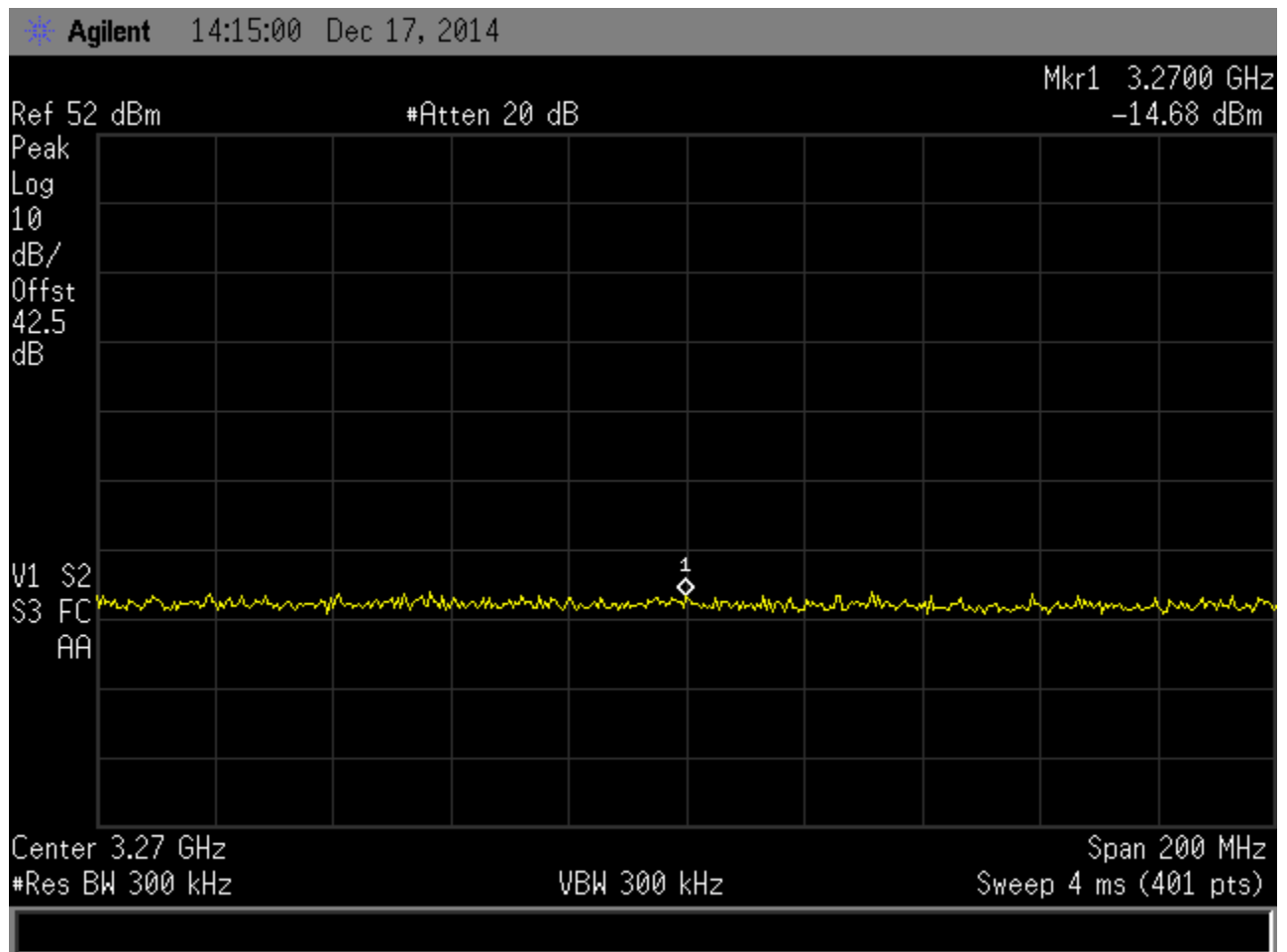


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious top port 3270MHz

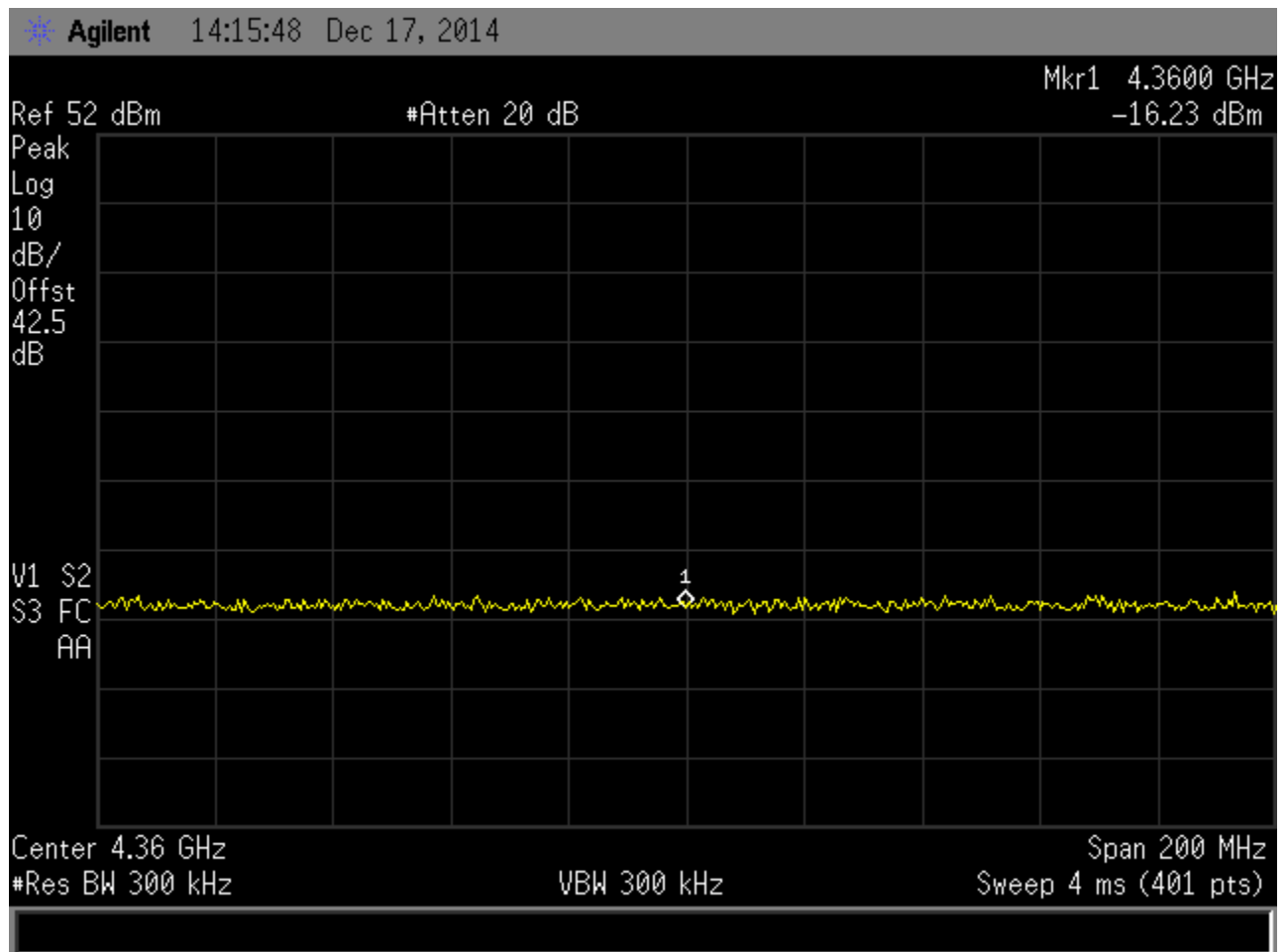


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious top port 4360MHz

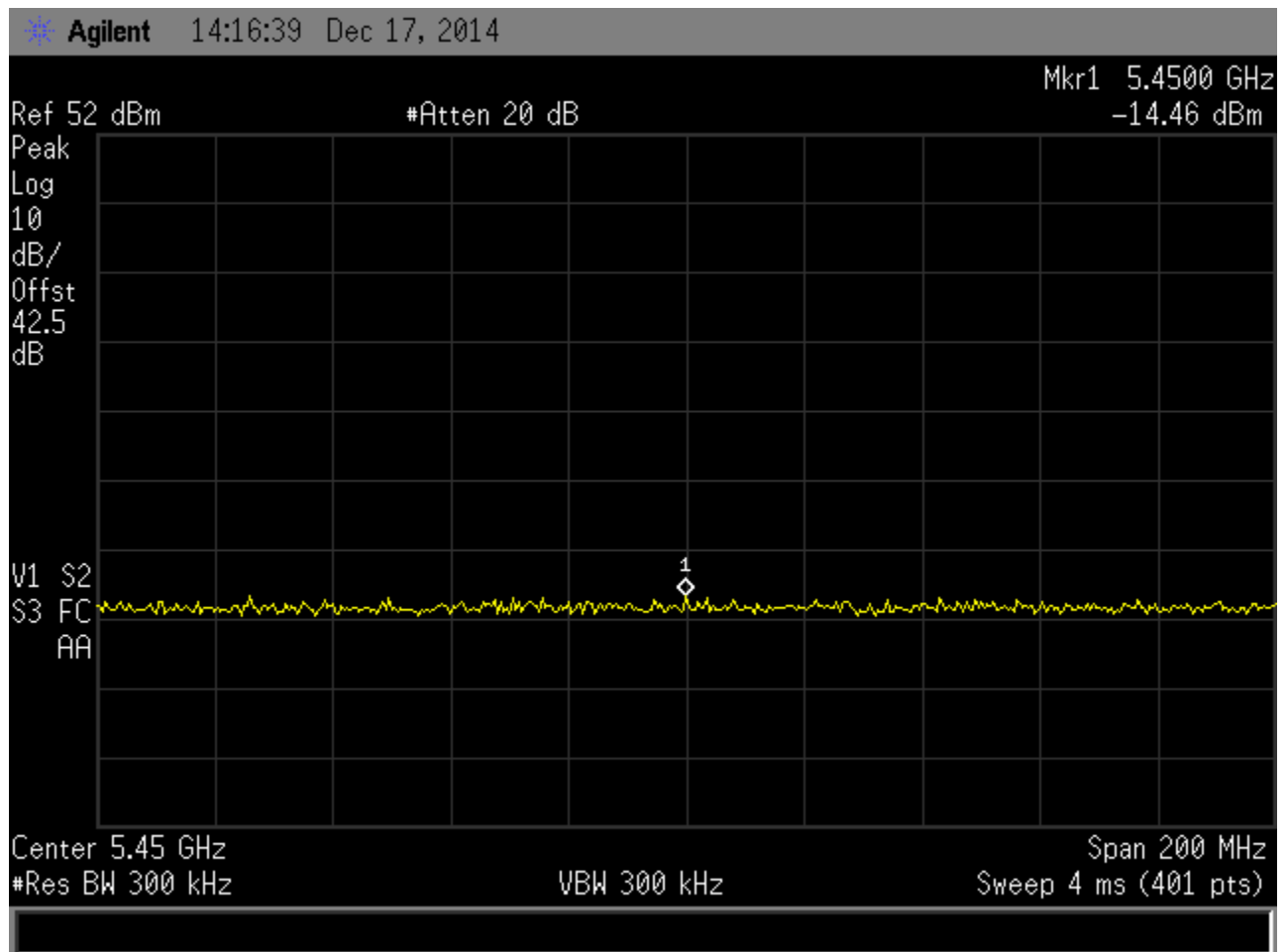


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious top port 5450MHz

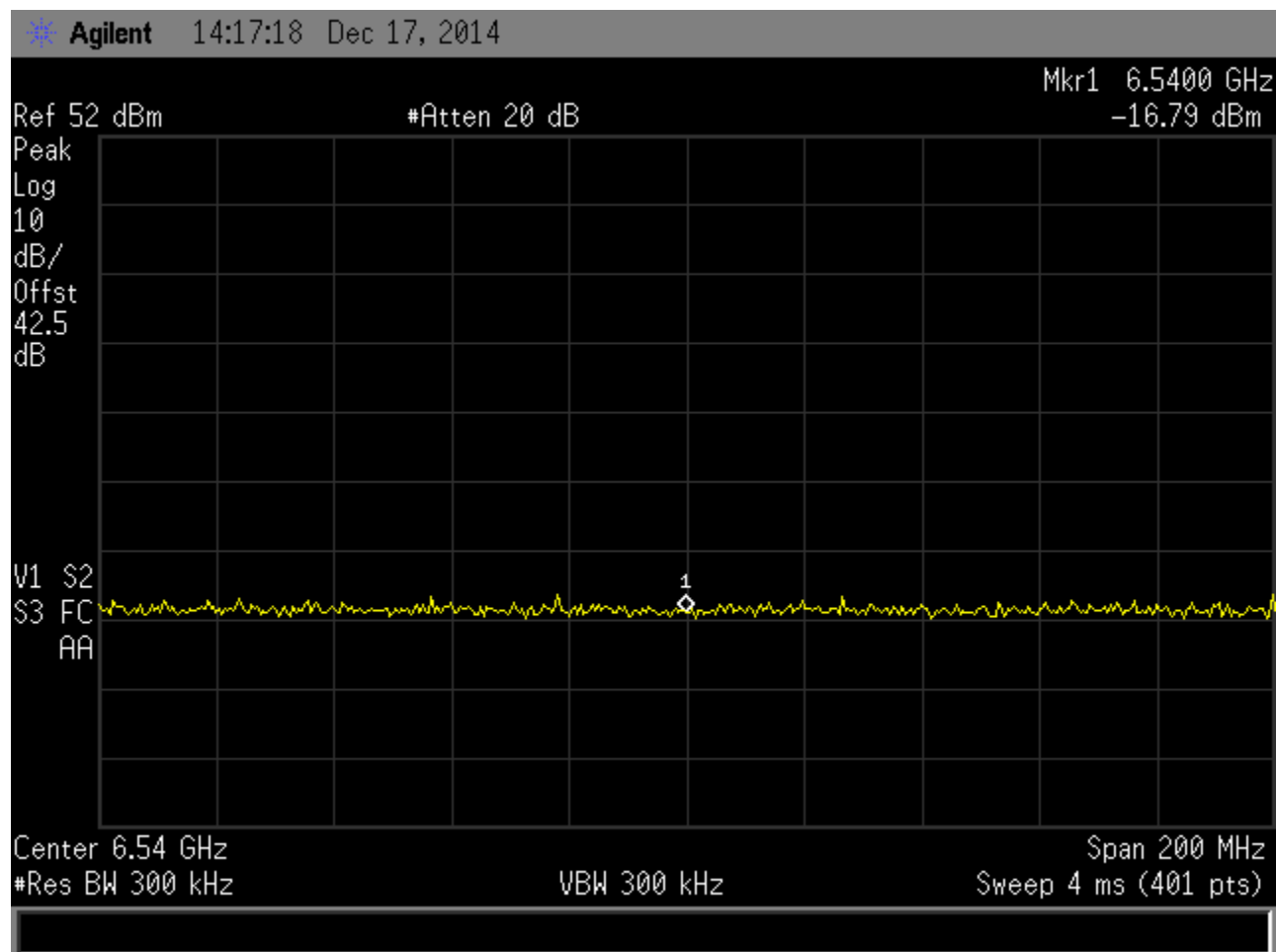


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious top port 6540MHz

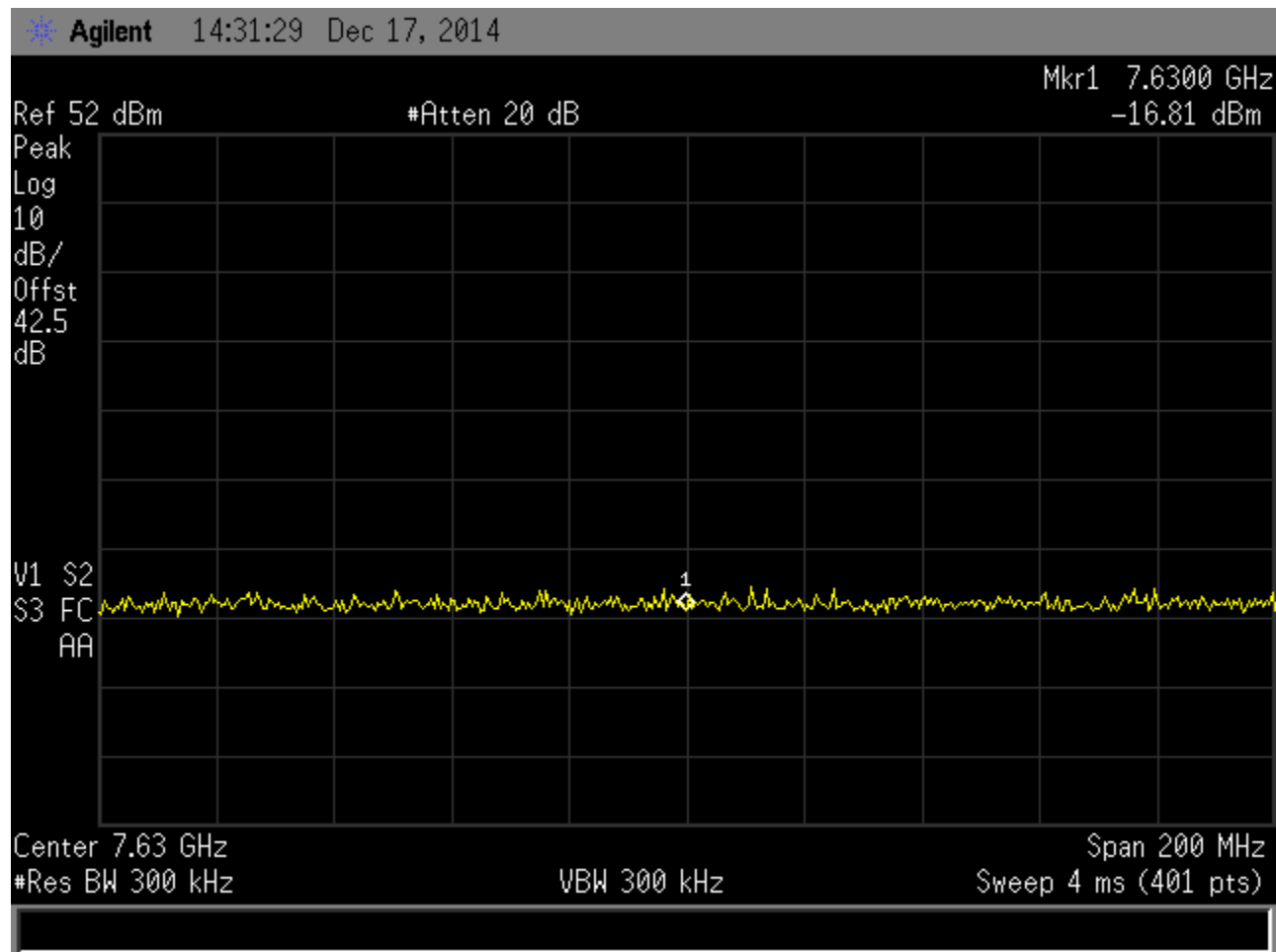


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious top port 7630MHz

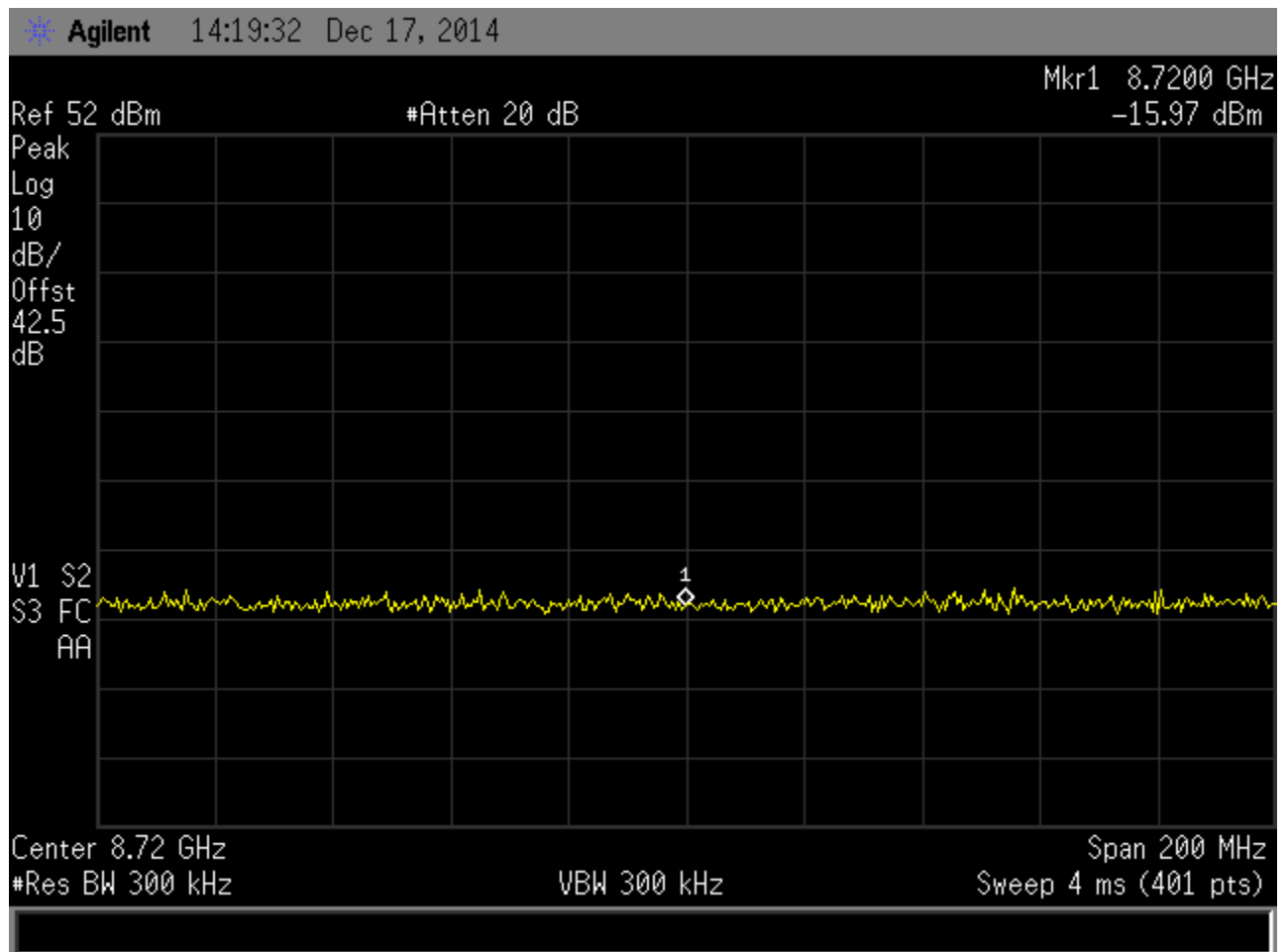


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious top port 8720MHz

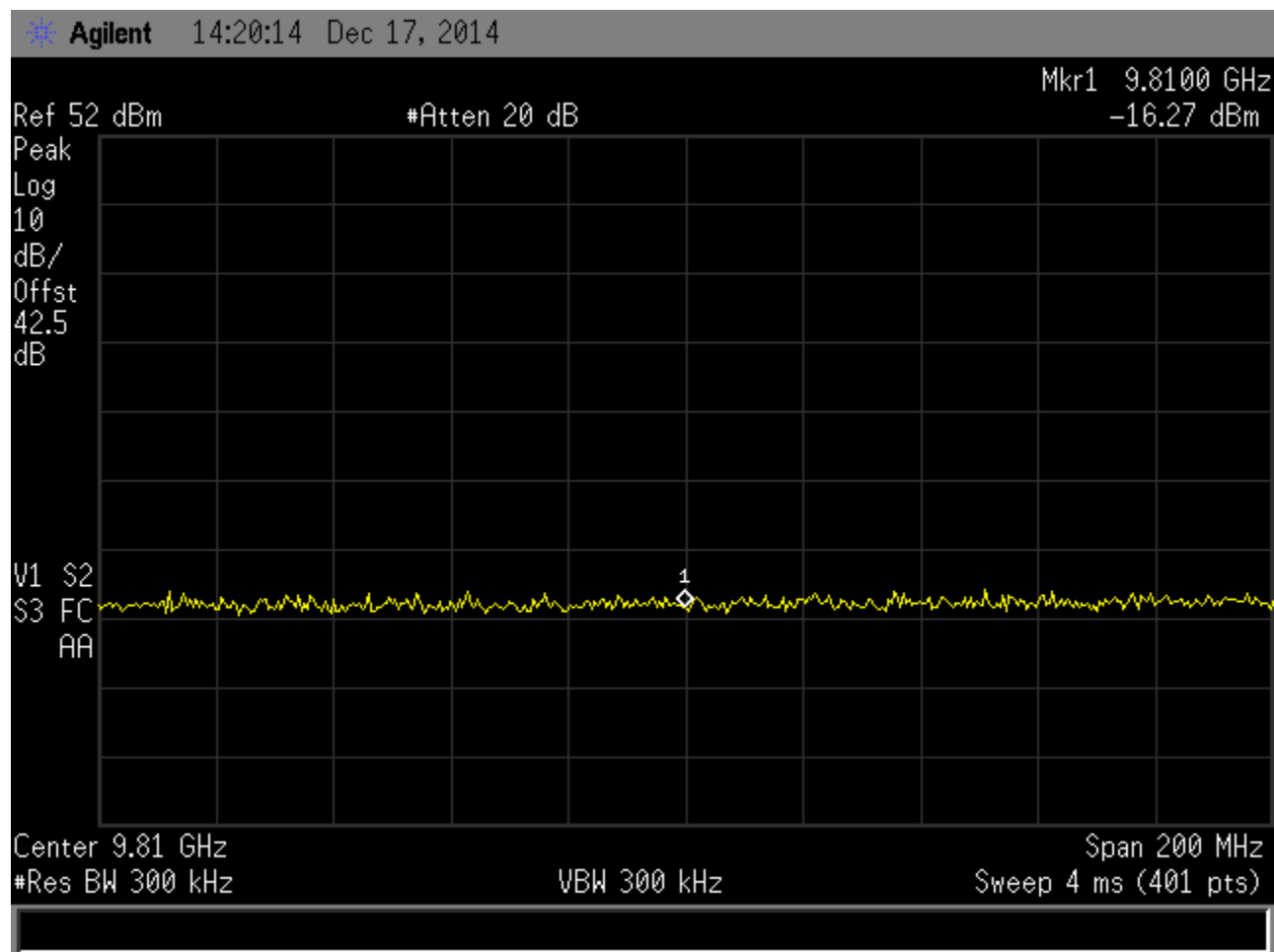


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious top port 9810MHz

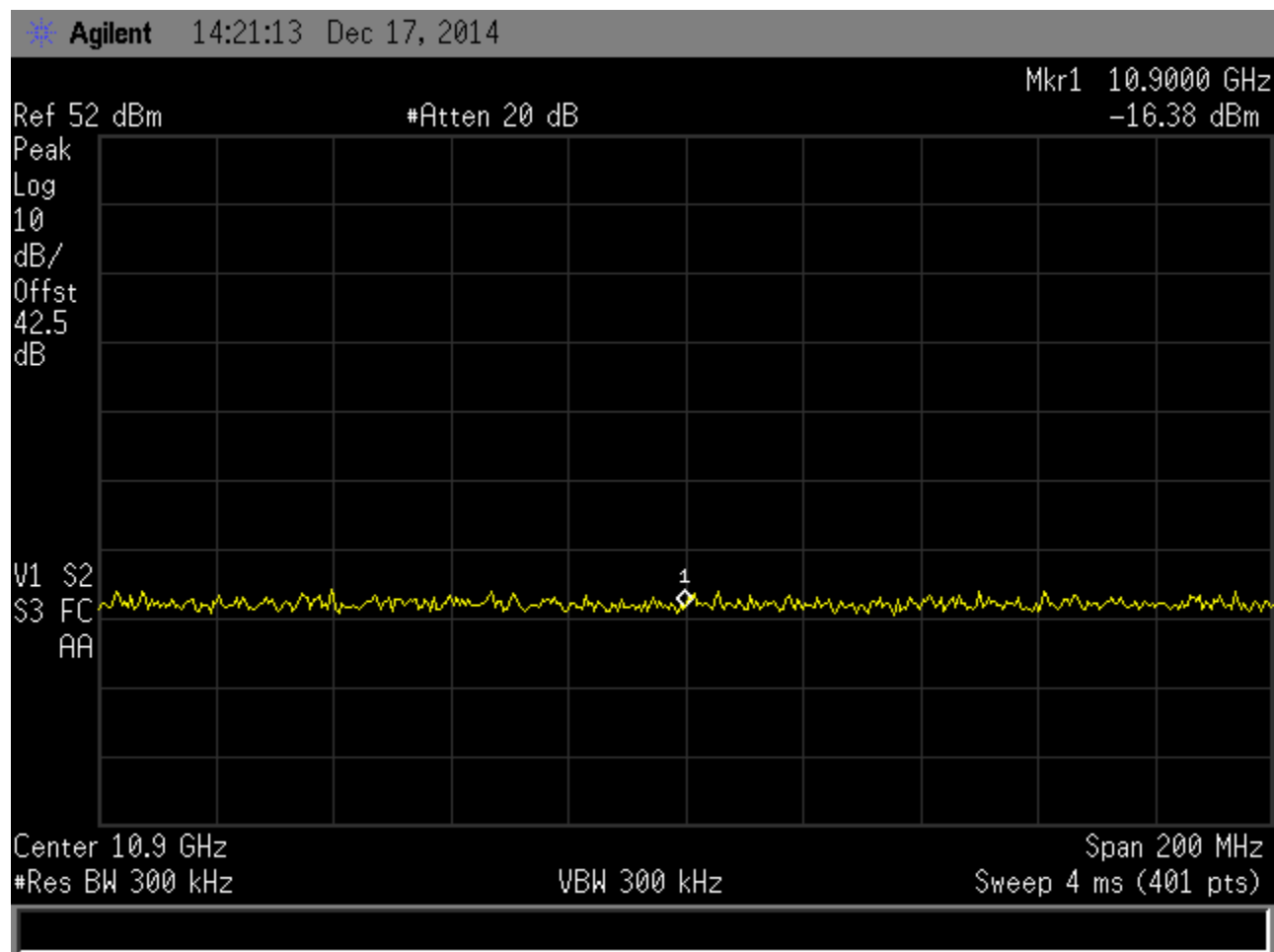


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious top port 10900MHz





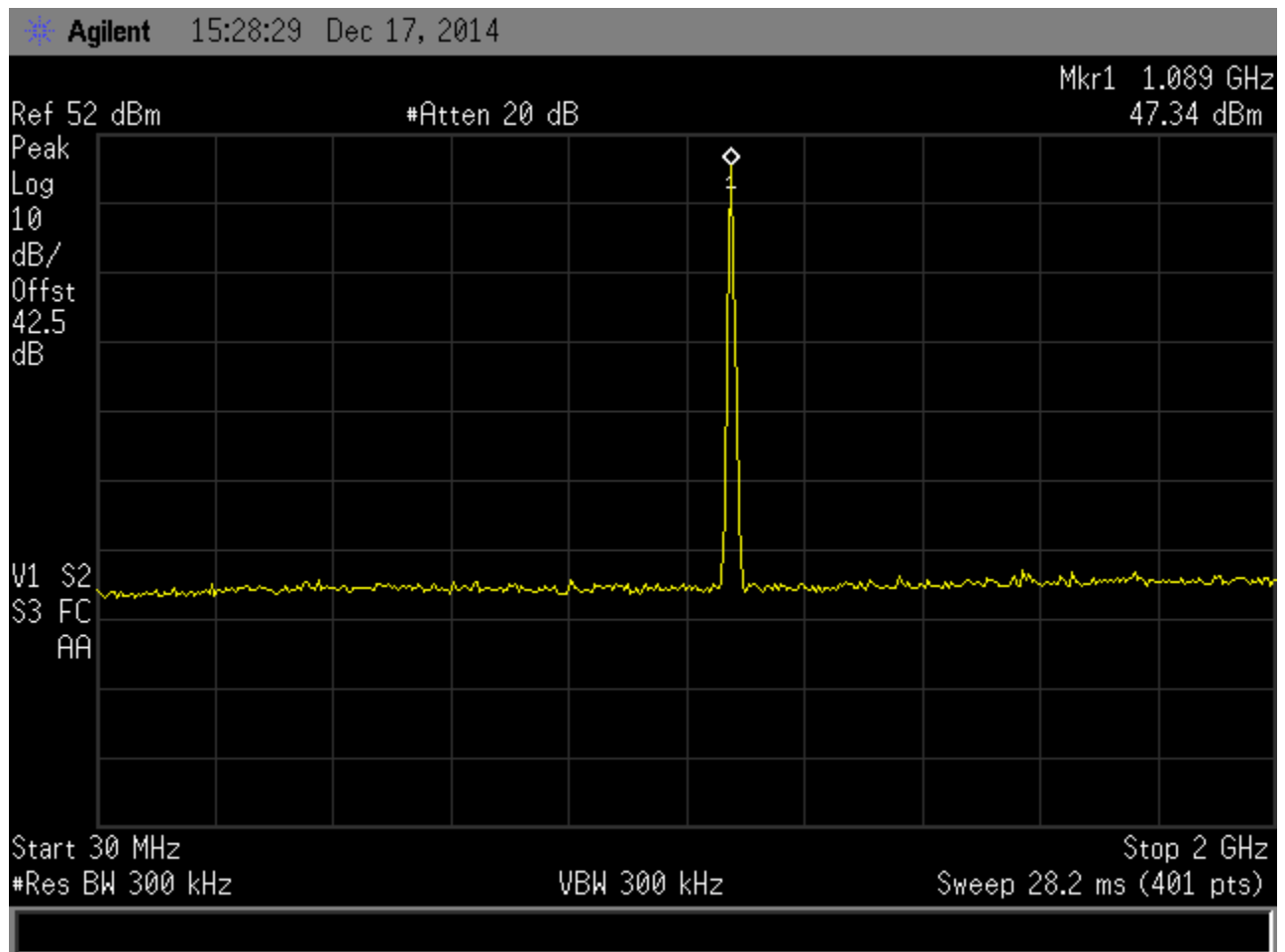
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FAX (951) 637-2704
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13 Jan 2015
RV58044-001

Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious bottom port 30MHz – 2GHz

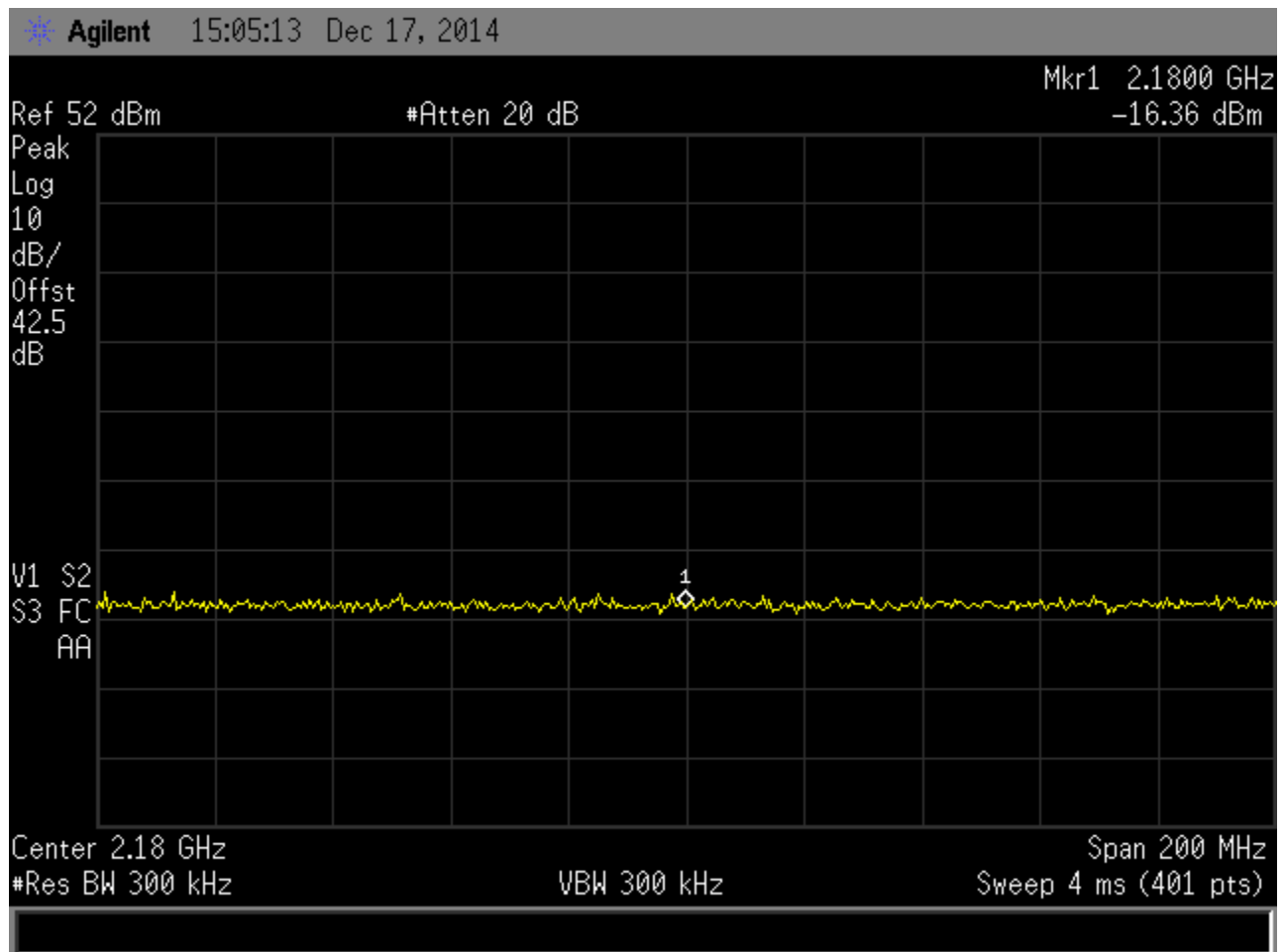


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious bottom port 2180MHz

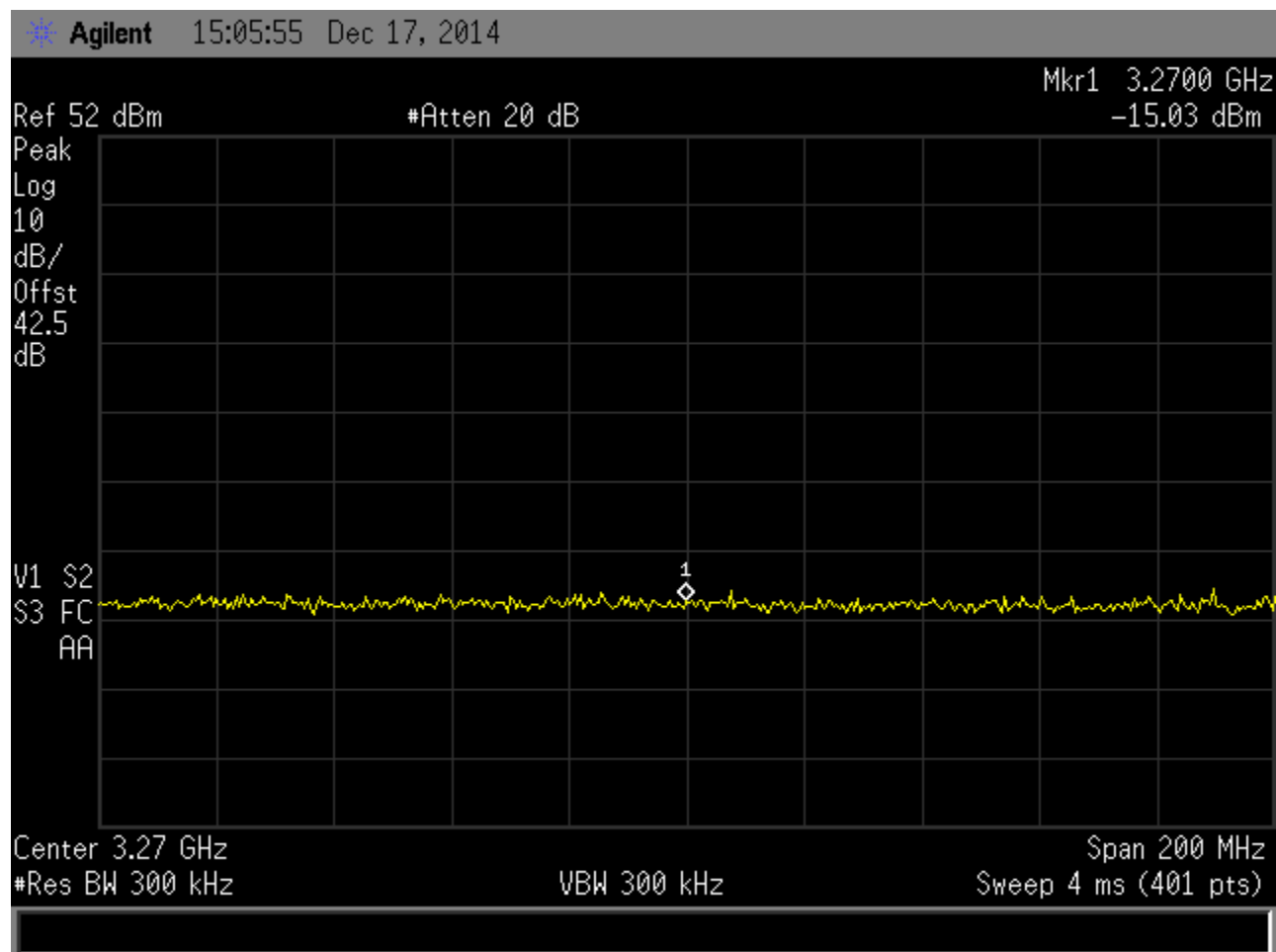


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious bottom port 3270MHz

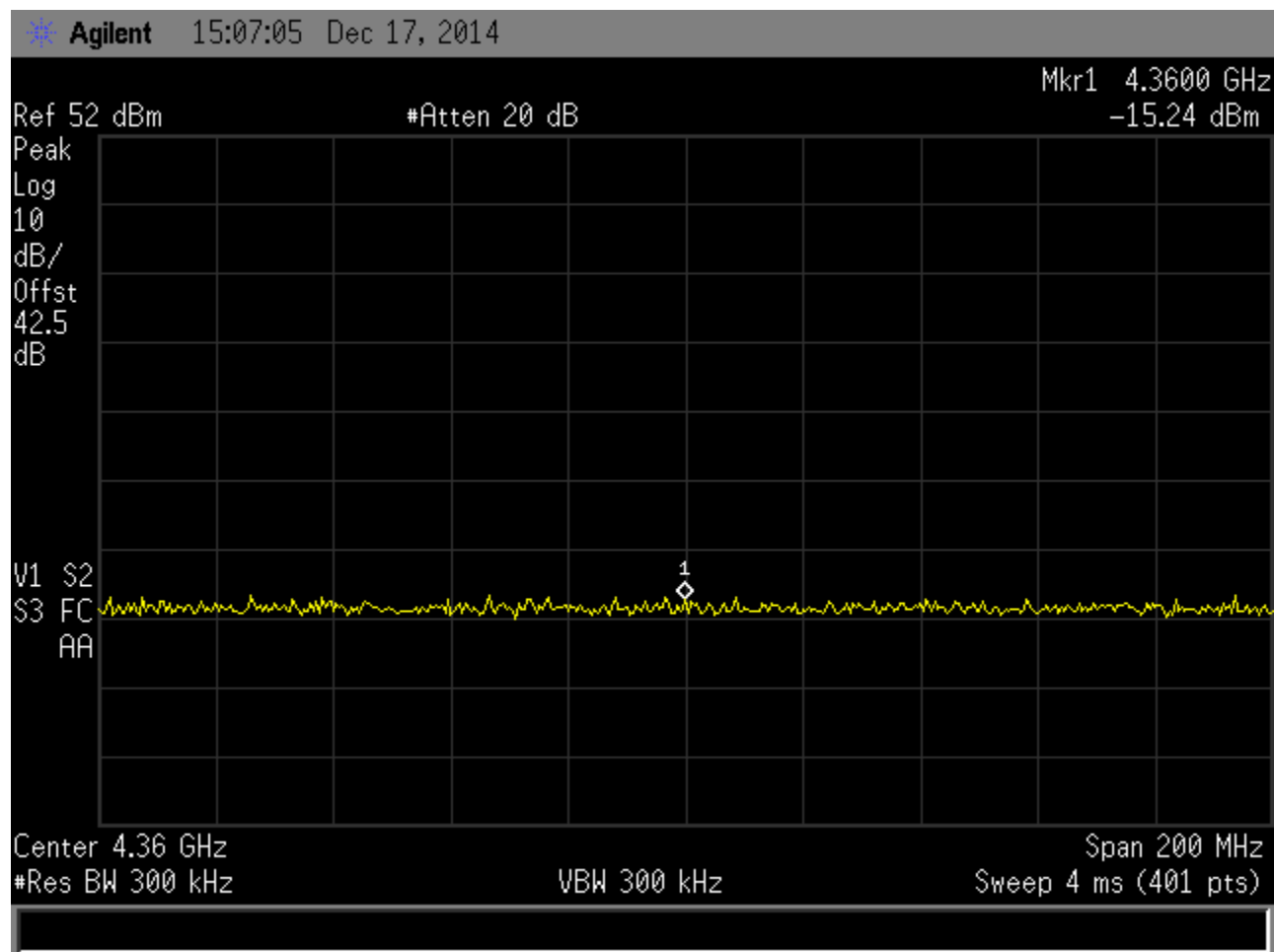


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious bottom port 4360MHz

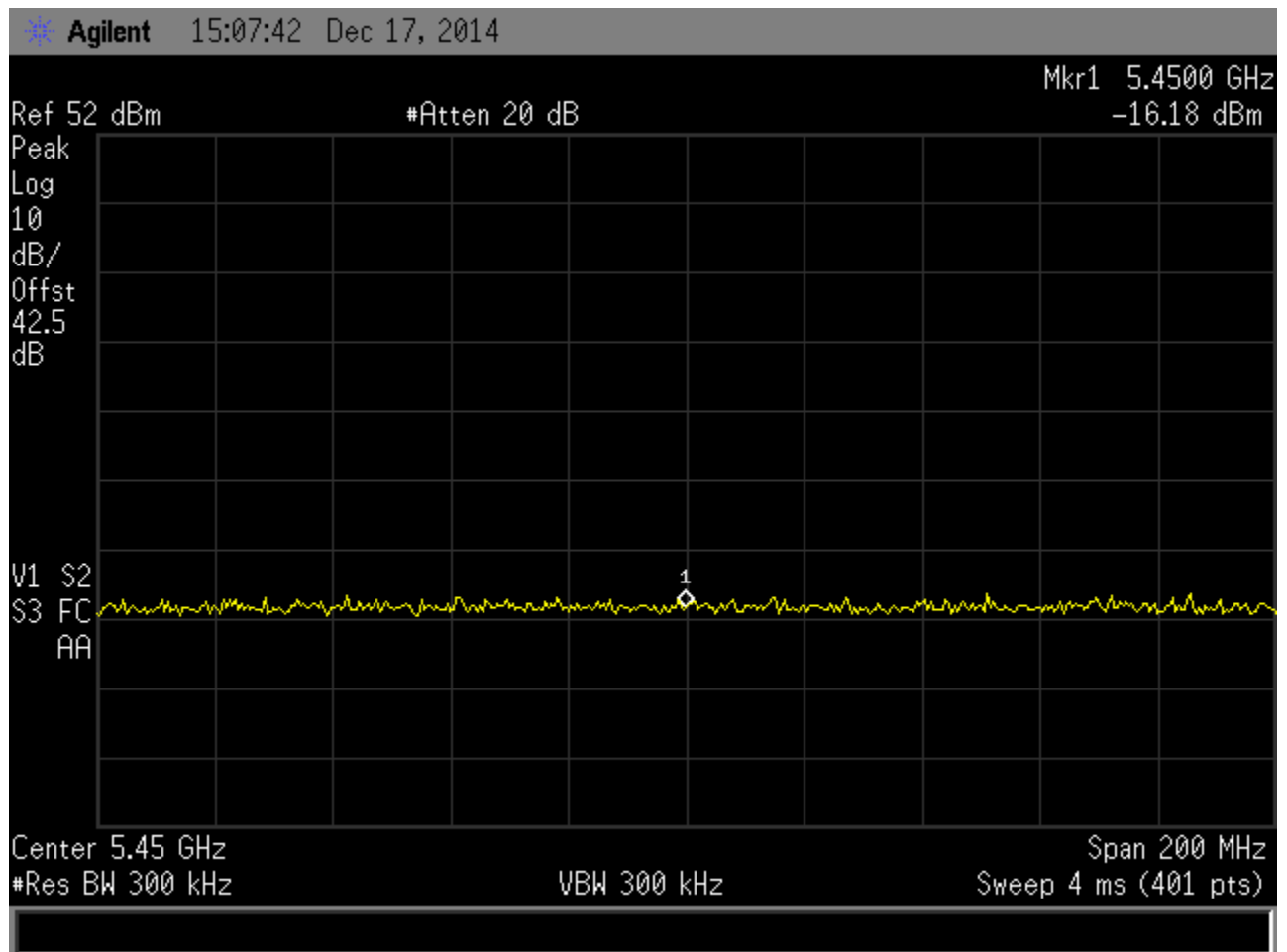


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious bottom port 5450MHz

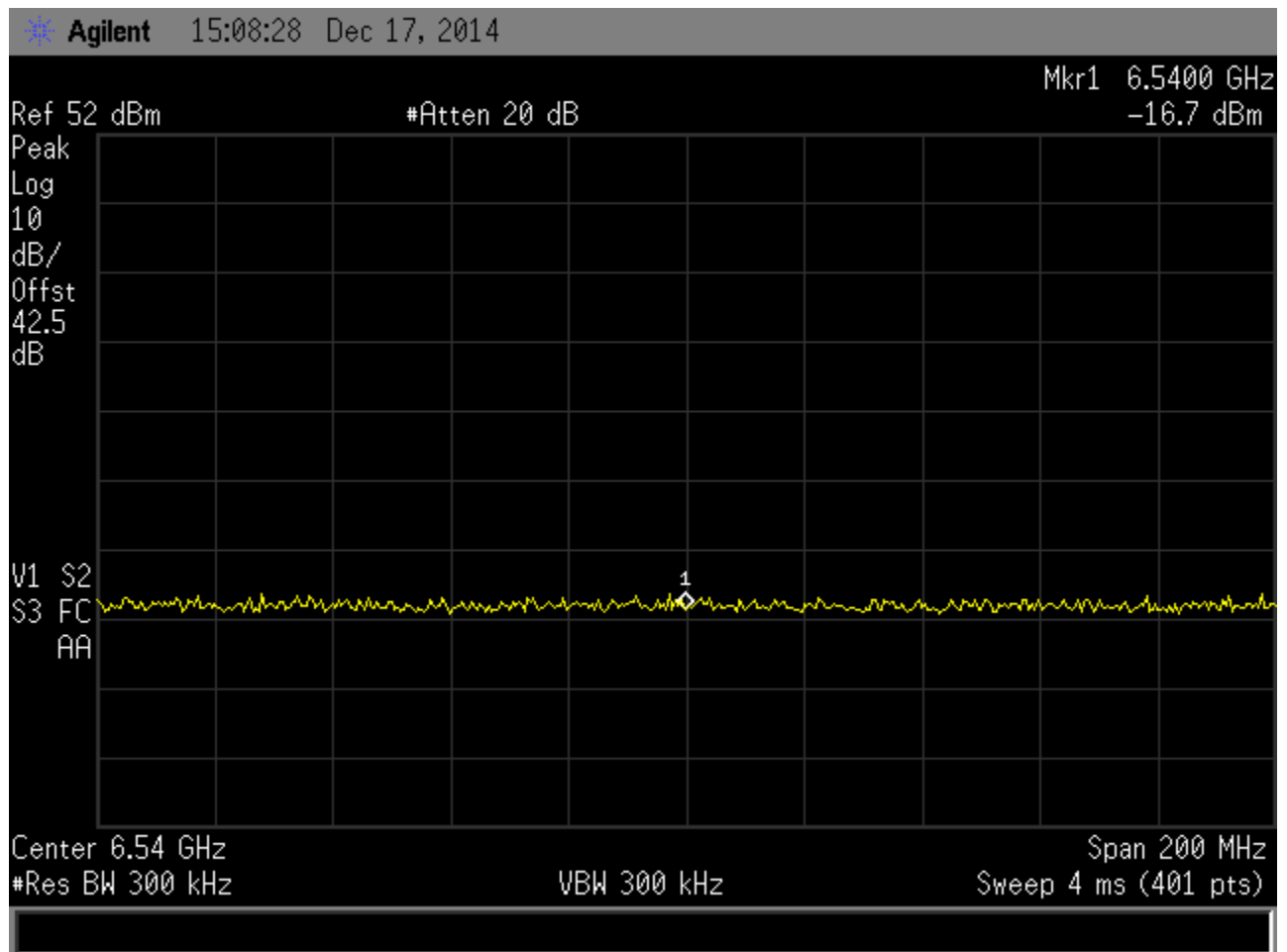


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious bottom port 6540MHz

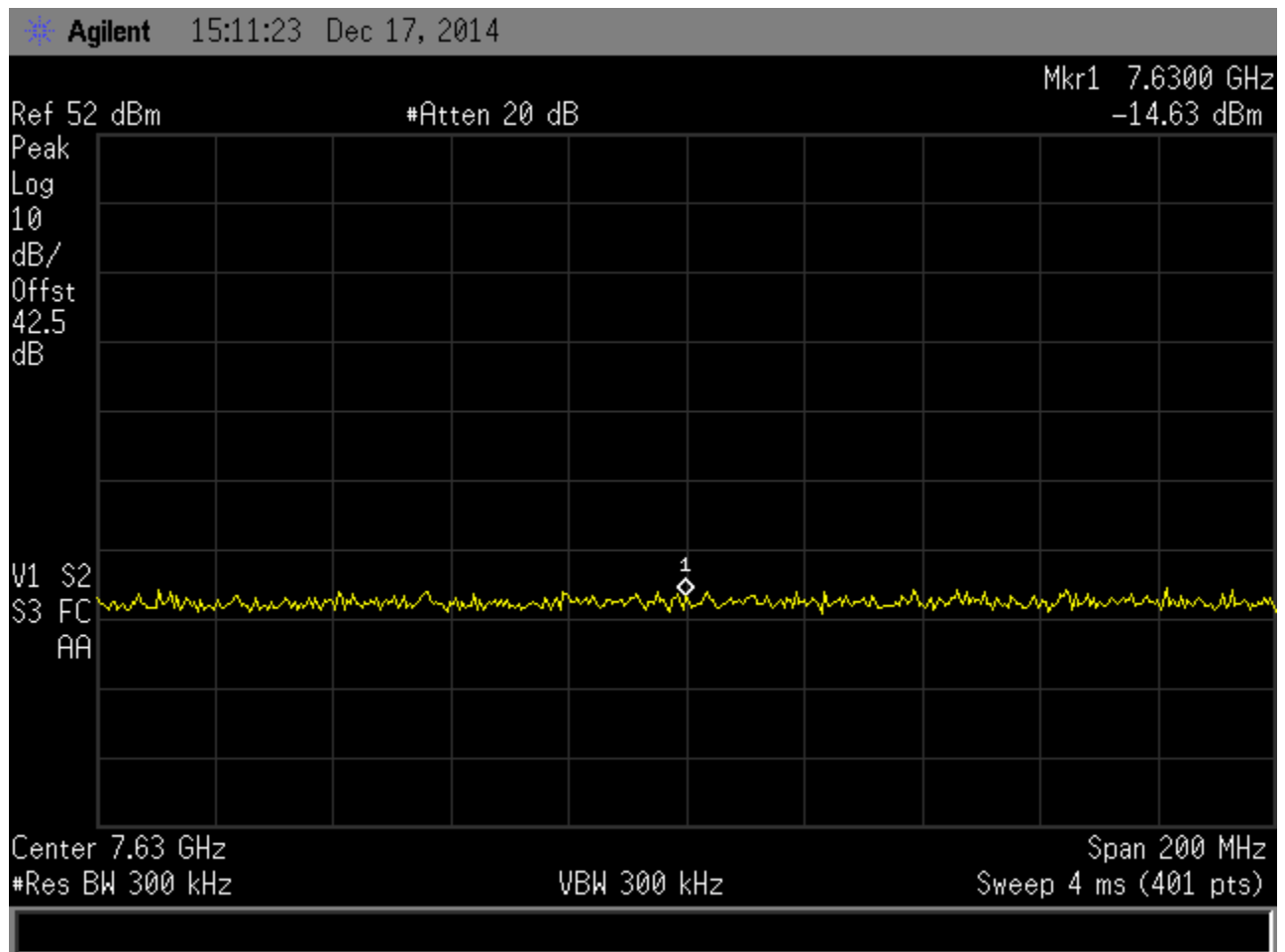


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious bottom port 7630MHz

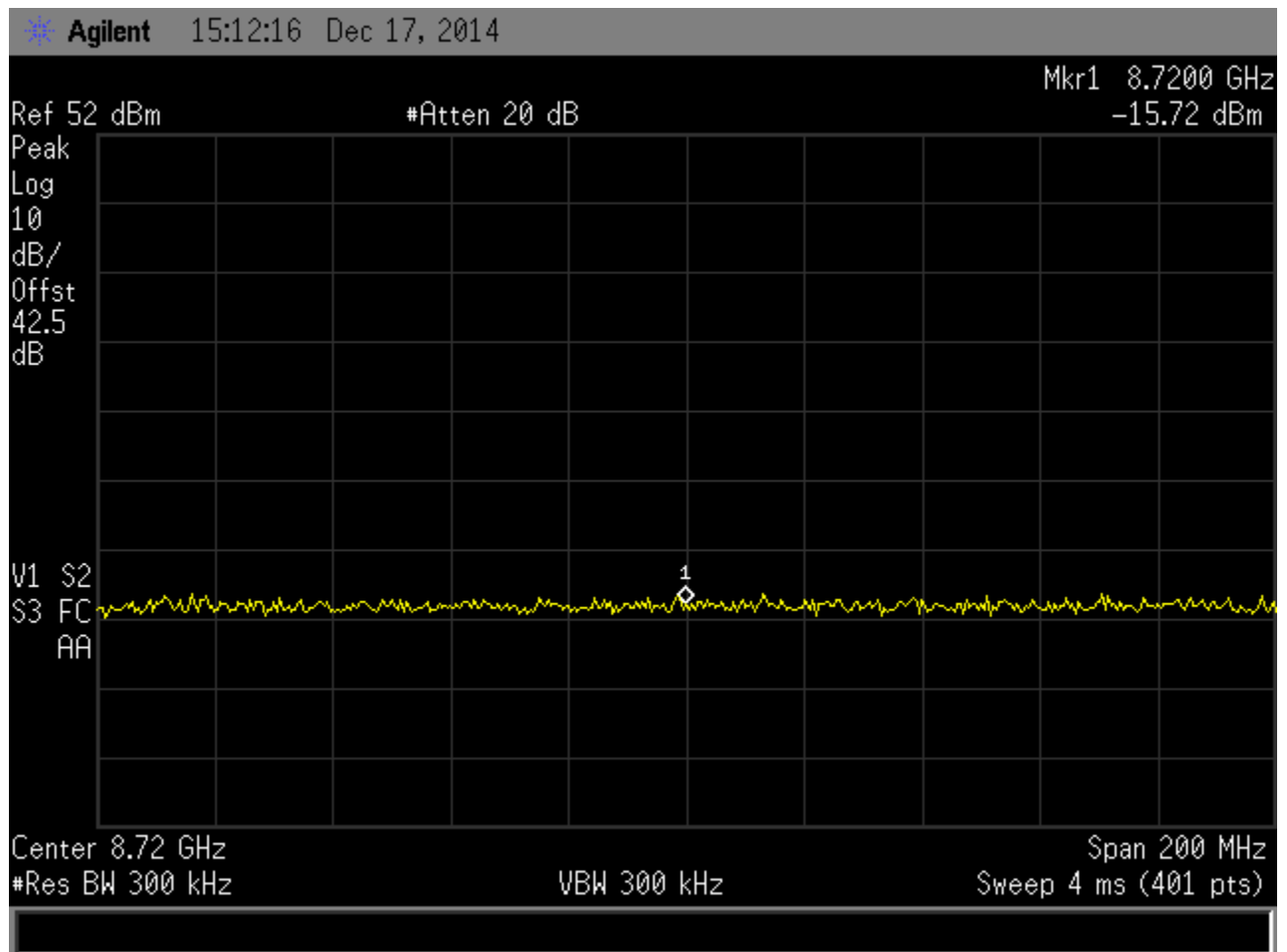


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious bottom port 8720MHz

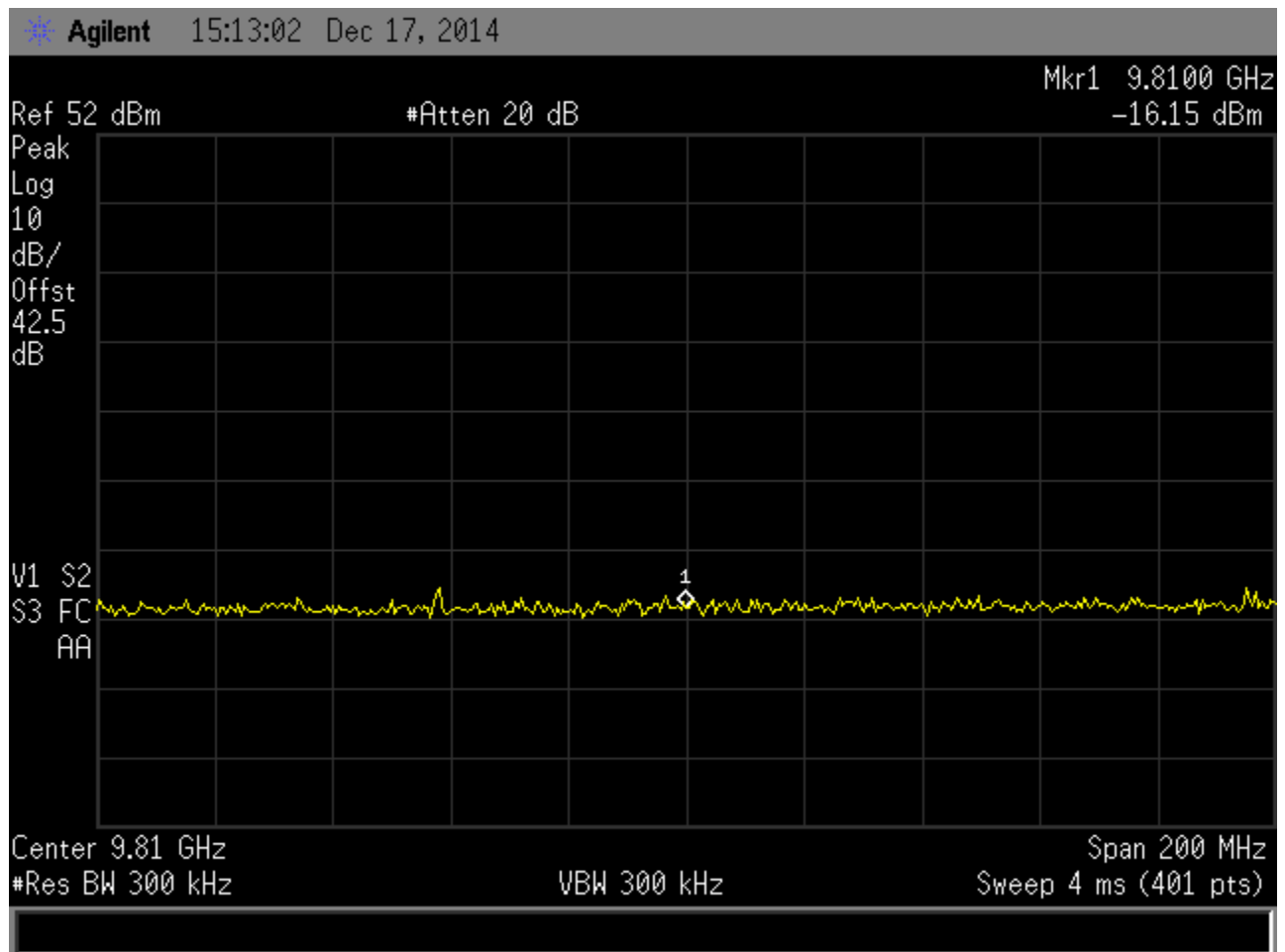


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious bottom port 9810MHz

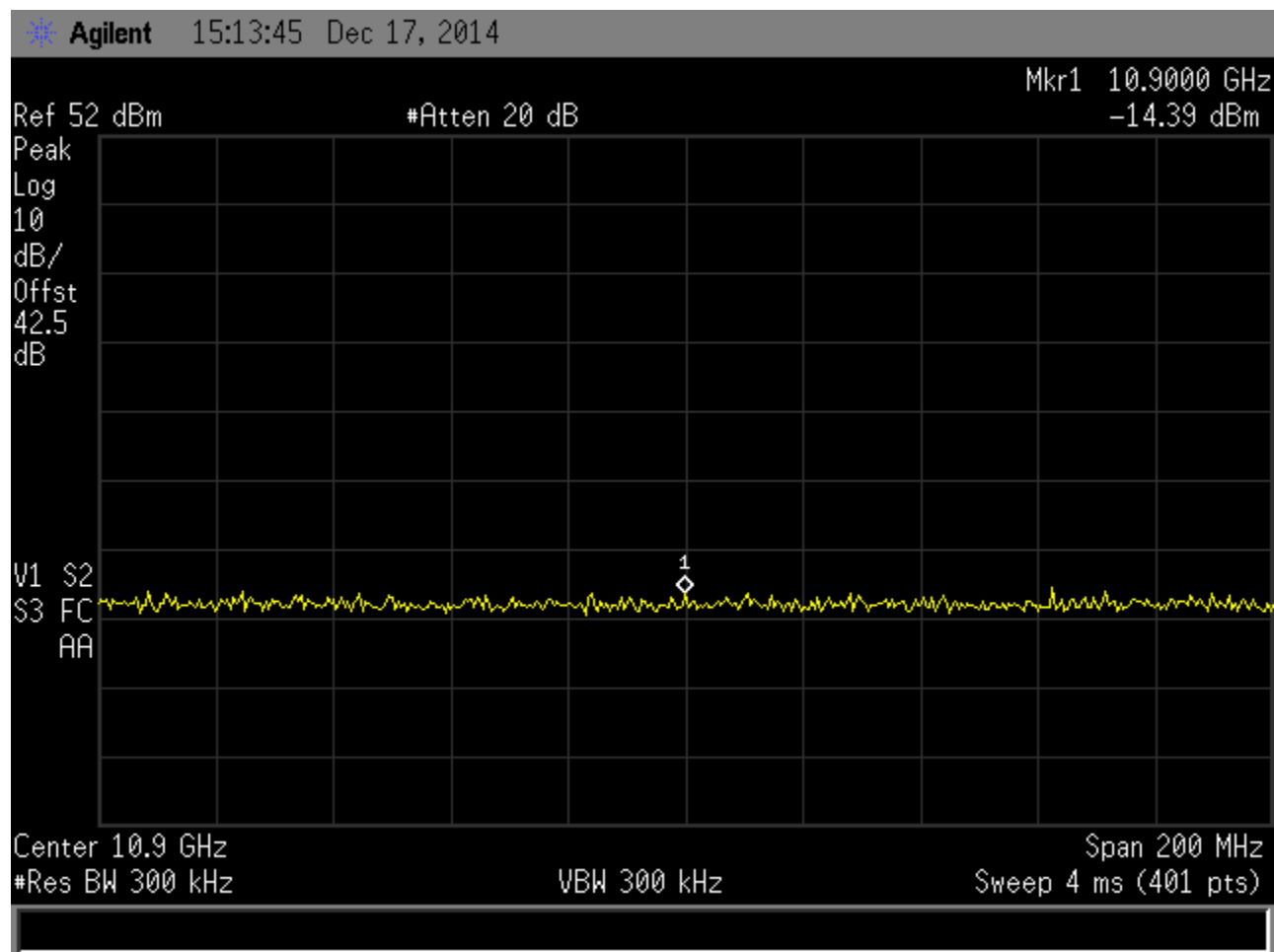


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Spurious Emissions at antenna terminals

DNB Job Number:	RV58044-001	Date: Dec 17 2014	Specification FCC 47 CFR 2.1051 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000		
Description:	Diversity Mode-S Transponder	S/N: N/A	
Test Equipment: (See pg. 11)	Asset #'s: 2047, 3066, 3635, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

XPDR Conducted Spurious bottom port 10900MHz



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Radiated Emissions

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 15.109 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000	Serial Number: N/A	
Description:	Diversity Mode-S Transponder		
Test Equipment: (See pg. 11)	Asset #'s: 11, 31, 1758, 1874, 1875, 1880, 1760, 364, 1698, 1234, 1430, 1965		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Radiated emissions Class B Digital Devices 30MHz – 1GHz

Frequency (MHz)	Meter (dBμV)	Antenna (dB)	Cable (dB)	Preamp (dB)	Corrected (dBμV/m)	Limit (dBμV/m)	Delta (dB)	Detector	Table	Polarity
31.024	37.2	13.1	1.2	-21.9	29.6	40	-10.4	PK	36	V
31.626	34.8	13	1.3	-21.9	27.2	40	-12.8	PK	34	V
34.782	42	12.9	1.3	-21.9	34.3	40	-5.7	PK	34	H
35.275	32.3	12.8	1.3	-21.9	24.5	40	-15.5	PK	36	H
36.524	36.7	12.6	1.3	-21.9	28.7	40	-11.3	PK	36	V
37.126	37.8	12.4	1.3	-21.9	29.6	40	-10.4	PK	34	V
38.024	34.5	12.2	1.3	-21.9	26.1	40	-13.9	PK	36	V
41.238	47.7	11.6	1.4	-21.9	38.8	40	-1.2	PK	34	H
43.275	41.5	11.2	1.4	-21.8	32.3	40	-7.7	PK	36	H
48.264	32.9	10.5	1.5	-21.8	23.1	40	-16.9	PK	34	H
51.264	33.7	10.2	1.5	-21.8	23.6	40	-16.4	PK	34	H
52.738	30.5	10	1.5	-21.8	20.2	40	-19.8	PK	36	H
54.811	35.6	9.8	1.5	-21.8	25.1	40	-14.9	PK	36	V
55.126	33.8	9.8	1.6	-21.8	23.4	40	-16.6	PK	34	V
61.004	41	9.5	1.6	-21.8	30.3	40	-9.7	PK	36	V
63.485	28.7	9.4	1.6	-21.8	17.9	40	-22.1	PK	34	H
64.126	31.1	9.4	1.6	-21.8	20.3	40	-19.7	PK	34	V
70.26	31.4	9.4	1.7	-21.8	20.7	40	-19.3	PK	36	H
71.504	36.1	9.4	1.7	-21.8	25.4	40	-14.6	PK	36	V
72	36.9	9.4	1.7	-21.8	26.2	40	-13.8	PK	34	H
72.401	50	9.4	1.7	-21.8	39.3	40	-0.7	QP	36	V
80	39	9.1	1.8	-21.9	28	40	-12	PK	34	H
81.946	34.6	9.1	1.8	-21.9	23.6	40	-16.4	PK	36	H
84.614	39.4	9.2	1.8	-21.9	28.5	40	-11.5	PK	36	V



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Frequency (MHz)	Meter (dBμV)	Antenna (dB)	Cable (dB)	Preamplifier (dB)	Corrected (dBμV/m)	Limit (dBμV/m)	Delta (dB)	Detector	Table	Polarity
86.106	37.3	9.2	1.9	-21.9	26.5	40	-13.5	PK	34	V
87.446	36.2	9.2	1.9	-21.9	25.4	40	-14.6	PK	36	H
109.946	47.6	10.2	2.1	-21.9	38	43.5	-5.5	PK	36	H
109.993	46.3	10.2	2.1	-21.9	36.7	43.5	-6.8	PK	36	V
111.106	34.7	10.3	2.1	-21.9	25.2	43.5	-18.3	PK	34	V
117.5	39.2	10.8	2.2	-21.9	30.3	43.5	-13.2	PK	34	H
120.006	46.2	10.9	2.2	-21.9	37.4	43.5	-6.1	PK	36	V
123.106	28.3	11.1	2.2	-21.9	19.7	43.5	-23.8	PK	34	V
128	45.9	11.4	2.3	-21.9	37.7	43.5	-5.8	PK	34	H
128.031	42.1	11.4	2.3	-21.9	33.9	43.5	-9.6	PK	36	H
139.106	35.4	11.9	2.4	-21.9	27.8	43.5	-15.7	PK	34	V
144	41.6	12.1	2.4	-21.9	34.2	43.5	-9.3	PK	34	H
150.011	43.7	12.4	2.5	-21.8	36.8	43.5	-6.7	PK	36	H
150.012	43.4	12.4	2.5	-21.8	36.5	43.5	-7	PK	34	H
150.024	49.1	12.4	2.5	-21.8	42.2	43.5	-1.3	QP	36	V
151.117	32.8	12.4	2.5	-21.8	25.9	43.5	-17.6	PK	34	V
159.126	42	12.8	2.6	-21.8	35.6	43.5	-7.9	PK	34	H
169.73	42.1	13.2	2.7	-21.8	36.2	43.5	-7.3	PK	36	H
171.412	44.9	13.3	2.7	-21.8	39.1	43.5	-4.4	PK	36	H
181.54	36.7	14	2.8	-21.8	31.7	43.5	-11.8	PK	36	V
193.126	33.9	14.3	2.9	-21.8	29.3	43.5	-14.2	PK	34	H
194.916	38.2	14.3	2.9	-21.8	33.6	43.5	-9.9	PK	34	V
196.344	38.5	14.4	3	-21.8	34.1	43.5	-9.4	PK	36	H
204.986	40.8	10.9	3	-21.8	32.9	43.5	-10.6	PK	44	V
205.535	42	10.8	3	-21.8	34	43.5	-9.5	PK	48	H
206.054	43.7	10.8	3	-21.8	35.7	43.5	-7.8	PK	36	H
209.978	50	10.7	3.1	-21.8	42	43.5	-1.5	QP	36	H
209.997	52.2	10.7	3.1	-21.8	44.2	43.5	0.7	PK	36	H
217.464	43.3	10.6	3.1	-21.8	35.2	46	-10.8	PK	44	V
220.695	45.5	10.6	3.2	-21.8	37.5	46	-8.5	PK	44	V
222.87	37.9	10.6	3.2	-21.8	29.9	46	-16.1	PK	44	V
224.879	53.2	10.6	3.2	-21.8	45.2	46	-0.8	PK	44	V
224.886	52.5	10.6	3.2	-21.8	44.5	46	-1.5	QP	44	V
232.997	39.6	10.7	3.2	-21.7	31.8	46	-14.2	PK	44	H
244.815	45.8	11.4	3.3	-21.7	38.8	46	-7.2	PK	48	H
247.497	34.8	11.5	3.3	-21.7	27.9	46	-18.1	PK	44	H
256.005	38.5	11.9	3.4	-21.7	32.1	46	-13.9	PK	44	V
263.974	34.9	12.2	3.5	-21.7	28.9	46	-17.1	PK	44	H



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Frequency (MHz)	Meter (dBμV)	Antenna (dB)	Cable (dB)	Preamplifier (dB)	Corrected (dBμV/m)	Limit (dBμV/m)	Delta (dB)	Detector	Table	Polarity
265.53	37.9	12.2	3.5	-21.7	31.9	46	-14.1	PK	44	V
265.922	40.4	12.2	3.5	-21.7	34.4	46	-11.6	PK	44	H
266.435	40.8	12.3	3.5	-21.7	34.9	46	-11.1	PK	44	V
272.038	41.4	12.6	3.5	-21.7	35.8	46	-10.2	PK	44	H
273.566	38.8	12.7	3.5	-21.7	33.3	46	-12.7	PK	58	H
273.566	36.8	12.7	3.5	-21.7	31.3	46	-14.7	PK	58	V
273.604	39.7	12.7	3.5	-21.7	34.2	46	-11.8	PK	58	V
273.622	48.8	12.7	3.5	-21.7	43.3	46	-2.7	PK	106	H
273.625	48	12.7	3.5	-21.7	42.5	46	-3.5	QP	106	H
276.008	36.7	12.9	3.6	-21.6	31.6	46	-14.4	PK	44	H
288.009	46.9	13.3	3.6	-21.6	42.2	46	-3.8	PK	48	V
288.026	40.1	13.3	3.6	-21.6	35.4	46	-10.6	PK	44	H
290.029	39.2	13.3	3.7	-21.6	34.6	46	-11.4	PK	44	H
300.686	35	13.8	3.7	-21.6	30.9	46	-15.1	PK	48	V
302.395	45.2	13.9	3.8	-21.6	41.3	46	-4.7	PK	48	V
310.019	40.2	14.7	3.8	-21.6	37.1	46	-8.9	PK	48	V
312.002	36.3	14.6	3.8	-21.6	33.1	46	-12.9	PK	44	H
352.5	29.8	14.7	4.1	-21.5	27.1	46	-18.9	PK	44	H
366.34	36.2	14.7	4.2	-21.5	33.6	46	-12.4	PK	44	V
390.005	36.9	14.6	4.4	-21.4	34.5	46	-11.5	PK	44	V
403.49	35.2	15.1	4.5	-21.4	33.4	46	-12.6	PK	44	H
409.995	34.6	15.3	4.5	-21.4	33	46	-13	PK	48	V
460.005	39.4	16.2	4.9	-21.3	39.2	46	-6.8	PK	44	V
490	34.5	17.5	5.1	-21.2	35.9	46	-10.1	PK	44	H
490.005	34.1	17.5	5.1	-21.2	35.5	46	-10.5	PK	44	V
504.81	32.4	17.5	5.2	-21.2	33.9	46	-12.1	PK	48	V
511.745	31.2	17.7	5.2	-21.2	32.9	46	-13.1	PK	48	H
520.02	37.7	17.9	5.3	-21.2	39.7	46	-6.3	PK	44	V
572	33.6	18.6	5.5	-21.2	36.5	46	-9.5	PK	44	H
660.02	33.8	19.5	5.8	-21.2	37.9	46	-8.1	PK	44	H
662.335	39.5	19.8	5.8	-21.2	43.9	46	-2.1	PK	48	H
709.21	31.9	20.2	6	-21.2	36.9	46	-9.1	PK	44	V
711.27	31.6	20.1	6	-21.2	36.5	46	-9.5	PK	48	V
719.995	35.3	19.8	6	-21.2	39.9	46	-6.1	PK	44	H
720.045	35.2	19.8	6	-21.2	39.8	46	-6.2	PK	44	V
722.365	31.6	19.9	6	-21.2	36.3	46	-9.7	PK	48	H
803.79	28.2	20.3	6.4	-21.3	33.6	46	-12.4	PK	48	H
810.92	30.7	20.5	6.4	-21.3	36.3	46	-9.7	PK	44	H

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Frequency (MHz)	Meter (dBμV)	Antenna (dB)	Cable (dB)	Preamplifier (dB)	Corrected (dBμV/m)	Limit (dBμV/m)	Delta (dB)	Detector	Table	Polarity
902.77	32.5	21.6	6.7	-21.3	39.5	46	-6.5	PK	44	V
903.36	32.9	21.6	6.7	-21.3	39.9	46	-6.1	PK	48	V
906.565	33.1	21.8	6.7	-21.3	40.3	46	-5.7	PK	44	H
912.47	30.2	22.1	6.8	-21.3	37.8	46	-8.2	PK	48	H

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Field Strength of Radiated Spurious

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1053 15.109 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000	Serial Number: N/A	
Description:	Diversity Mode-S Transponder		
Test Equipment: (See pg. 11)	Asset #'s: 11, 364, 1698, 2079, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Radiated Spurious Emissions TAS 1GHz – 11GHz

Frequency (MHz)	Amplitude (dBμV)	Antenna (dB)	Preamplifier (dB)	Cable (dB)	Corrected (dBμV/m)	Polarity
2060	61	28	29	0.9	60.9	V
3090	60	31	29	1	63	V
4120	46	32	29	1.4	50.4	V
5150	34	34	29	1.5	40.5	V
6180	40	35	29	1.6	47.6	V
7210	27	37	29	1.7	36.7	V
8240	24	38	29	1.8	34.8	V
9270	20	38	29	1.9	30.9	V
10300	20	38	29	2	31	V
2060	55	28	29	0.9	54.9	H
3090	46	31	29	1	49	H
4120	28	32	29	1.4	32.4	H
5150	25	34	29	1.5	31.5	H
6180	29	35	29	1.6	36.6	H
7210	25	37	29	1.7	34.7	H
8240	22	38	29	1.8	32.8	H
9270	21	38	29	1.9	31.9	H
10300	21	38	29	2	32	H

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Field Strength of Radiated Spurious

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1053 15.109 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000	Serial Number: N/A	
Description:	Diversity Mode-S Transponder		
Test Equipment: (See pg. 11)	Asset #'s: 11, 364, 1698, 2079, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Radiated Spurious Emissions XPDR Top Port 1GHz – 11GHz

Frequency (MHz)	Amplitude (dBμV)	Antenna (dB)	Preamplifier (dB)	Cable (dB)	Corrected (dBμV/m)	Polarity
2180	85	28	29	0.9	84.9	V
3270	60	31	29	1	63	V
4360	67	32	29	1.4	71.4	V
5450	55	34	29	1.5	61.5	V
6540	44	35	29	1.6	51.6	V
7630	45	37	29	1.7	54.7	V
8720	27	38	29	1.8	37.8	V
9810	22	38	29	1.9	32.9	V
10900	21	38	29	2	32	V
2180	70	28	29	0.9	69.9	H
3270	40	31	29	1	43	H
4360	46	32	29	1.4	50.4	H
5450	41	34	29	1.5	47.5	H
6540	36	35	29	1.6	43.6	H
7630	26	37	29	1.7	35.7	H
8720	21	38	29	1.8	31.8	H
9810	20	38	29	1.9	30.9	H
10900	20	38	29	2	31	H

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Field Strength of Radiated Spurious

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1053 15.109 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000	Serial Number: N/A	
Description:	Diversity Mode-S Transponder		
Test Equipment: (See pg. 11)	Asset #'s: 11, 364, 1698, 2079, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Radiated Spurious Emissions XPDR Bottom Port 1GHz – 11GHz

Frequency (MHz)	Amplitude (dBμV)	Antenna (dB)	Preamplifier (dB)	Cable (dB)	Corrected (dBμV/m)	Polarity
2180	90	28	29	0.9	89.9	V
3270	72	31	29	1	75	V
4360	67	32	29	1.4	71.4	V
5450	60	34	29	1.5	66.5	V
6540	39	35	29	1.6	46.6	V
7630	39	37	29	1.7	48.7	V
8720	25	38	29	1.8	35.8	V
9810	22	38	29	1.9	32.9	V
10900	19	38	29	2	30	V
2180	70	28	29	0.9	69.9	H
3270	52	31	29	1	55	H
4360	56	32	29	1.4	60.4	H
5450	46	34	29	1.5	52.5	H
6540	37	35	29	1.6	44.6	H
7630	27	37	29	1.7	36.7	H
8720	22	38	29	1.8	32.8	H
9810	20	38	29	1.9	30.9	H
10900	20	38	29	2	31	H



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Frequency Stability

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1053 15.109 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000	Serial Number: N/A	
Description:	Diversity Mode-S Transponder		
Test Equipment: (See pg. 11)	Asset #'s: 11, 364, 1698, 2079, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Frequency Stability TAS (Temperature Variation)

Temperature (Degrees C)	Power Output (dBm)	Frequency (MHz)
-20	53.2	1030
-10	52.9	1030
0	52.8	1030
10	53	1030
20	52.7	1030
30	52.3	1030
40	52.5	1030
50	52.4	1030
55	52.5	1030

Frequency Stability XPDR (Temperature Variation)

Temperature (Degrees C)	Top Port		Bottom Port	
	Power Output (dBm)	Frequency (MHz)	Power Output (dBm)	Frequency (MHz)
-20	52.9	1090	53	1090
-10	52.5	1090	52.6	1090
0	52.5	1090	52.6	1090
10	52.4	1090	52.7	1090
20	52.7	1090	52.9	1090
30	52.1	1090	52.2	1090
40	52.1	1090	52.4	1090
50	52.9	1090	52.3	1090
55	52.3	1090	52.5	1090

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Frequency Stability

DNB Job Number:	RV58044-001	Date: Dec 18 2014	Specification FCC 47 CFR 2.1053 15.109 87.139
Customer:	ACSS, an L-3 Communications & Thales Company		
Model Number:	NGT-9000	Serial Number: N/A	
Description:	Diversity Mode-S Transponder		
Test Equipment: (See pg. 11)	Asset #'s: 11, 364, 1698, 2079, 2264		
EUT performed within the requirements of the applicable Standard(s) YES ☒ NO ☐ SIGNED Thomas Elders			

Frequency Stability TAS (Voltage Variation)

Supply Voltage (V)	Power Output (dBm)	Frequency (MHz)
11.9	52.6	1030
14	52.5	1030
16.1	52.7	1030
23.8	52.7	1030
28	52.8	1030
32.2	52.9	1030

Frequency Stability XPDR (Voltage Variation)

	Top Port		Bottom Port	
Supply Voltage (V)	Power Output (dBm)	Frequency (MHz)	Power Output (dBm)	Frequency (MHz)
11.9	52.7	1090	53	1090
14	52.7	1090	53	1090
16.1	52.7	1090	53	1090
23.8	52.7	1090	53.1	1090
28	52.9	1090	53.1	1090
32.2	52.9	1090	52.2	1090



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13 Jan 2015
RV58044-001

End of Report